CITY OF BOSTON

REAL ESTATE MARKET & ASSESSMENT REVIEW

FISCAL YEAR 1991

RAYMOND L. FLYNN, MAYOR

ASSESSING DEPARTMENT
THADDEUS J. JANKOWSKI, JR.
COMMISSIONER

Fall, 1990

September, 1990

Dear City of Boston Property Owner:

Boston's real estate market was again stable in 1989. The principal indicators of value for both residential and commercial properties, while reflecting a slowdown in market activity, reveal no significant changes in property values. As a result, the City has once again elected not to revalue or trend assessments for Fiscal Year 1991.

This report presents the Assessing Department's analysis of the Boston real estate market for the Fiscal Year 1991 assessments. This analysis extends well beyond the largely anecdotal evidence reported in the press, relying instead upon a vast array of data on sales, rents, interest rates and other important components of real estate value. Included here are the analysis and procedures employed in the production of property values. Also included is a description of the Department's maintenance activities which are required to keep current the physical data on each property which was sold, renovated, demolished or newly constructed.

I wish to thank the many taxpayers who provided valuable input for our market analysis, including the many participants in the Department's Income/Expense Questionnaire and market surveys. Accurate, timely market data is critical to the efficient production and maintenance of accurate assessments.

I strongly believe that taxpayers are entitled to a full explanation of the procedures followed in determining assessed values. This document represents our efforts to keep taxpayers fully informed. As always, I welcome your comments.

Sincerely,

Thaddeus J. Jankowski, Jr.
Commissioner of Assessing

FISCAL YEAR 1991 REAL ESTATE MARKET AND ASSESSMENT REVIEW

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Introduction

INTRODUCTION

The Boston real estate market is dynamic by nature, constantly moving in response to the various forces of the economy. A shift in the market is usually reflected in the movement of current sale prices. Sometimes a market shift is subtle and almost imperceptible. Often it is local, affecting only a small geographic region or neighborhood. At other times, the market response is a major swing that affects an entire region, such as the greater Boston area or even the entire Northeast. An assessing department must be cognizant of all underlying market influences in order to provide property assessments that are accurate, credible, fair and equitable.

Although 1989 witnessed a gradual slowdown in market activity, Boston's real estate market has remained stable. For example, the median sale price of residential properties in Suffolk County[1] reflected little change, increasing a modest 0.3% from the fourth quarter of 1988 to the same quarter in 1989. During the same period, average asking rents for office space in downtown Boston remained virtually level.

Fiscal Year 1991 Assessments

The Assessing Department is statutorily obligated to assess all property at its full and fair cash value as of January 1 of each year (Massachusetts General Laws, Chapter 59, Section 38). The assessed value for the Fiscal Year 1991

[1]Includes Boston, Winthrop, Chelsea and Revere.

tax bill incorporates the full and fair cash value of property as of January 1, 1990. Full and fair cash value represents the price that an owner willing, but not under compulsion to sell, ought to receive from one willing, but not under compulsion to buy.

Chapter 40 of Section 56 of the Massachusetts General Laws requires that all cities and towns complete a revaluation of each property every three years[2]. Boston's most recent revaluation was completed in Fiscal Year 1989, and incorporated market data from Calendar Year 1987. During this revaluation, the Assessing Department, in anticipation of the stabilization of real estate prices, placed assessments slightly below market levels.

In the years between revaluations, the city has the option of indexing, or trending, property values to keep assessments current with the market[3]. From Fiscal Year 1983 to 1989, the Assessing Department either revalued or trended assessments upward in each year. For Fiscal Year 1990, the Assessing Department, while cognizant of a modest increase in real estate values for some properties, chose not to trend assessments to maintain conservative assessment levels. After careful review and analysis of market conditions in 1989, the City has determined that market indexing is again not

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[2]The City will conduct a revaluation next year for the Fiscal Year 1992 assessments.

[3]Market indexing and trending are synonymous: values are changed on a city wide basis by means of applying an appropriate factor to the existing values.

warranted to achieve fairness and equity for Fiscal Year 1991. Consequently, the city has not trended property values in the two years subsequent to the Fiscal Year 1989 revaluation.

Fiscal Year 1991 assessments, therefore, reflect early calendar year 1987 market conditions and remain slightly below current market levels due to the cushion provided by the Department's conservative valuation policies. The following displays how the City of Boston has remained in compliance with the "full and fair cash value" standard since Fiscal Year 1983.

*FY 1983 PARCEL-SPECIFIC REVALUATION

*FY 1984 MARKET INDEXING OF ASSESSMENTS

*FY 1985 MARKET INDEXING OF ASSESSMENTS

*FY 1986 PARCEL-SPECIFIC REVALUATION

*FY 1987 MARKET INDEXING OF ASSESSMENTS

*FY 1988 MARKET INDEXING OF ASSESSMENTS

*FY 1989 PARCEL-SPECIFIC REVALUATION

*FY 1990 NO CHANGE TO PROPERTY VALUES

***FY 1991 NO CHANGE TO PROPERTY VALUES**

This report presents a detailed summary of the Department's market analysis. Included is the examination of sales data, commercial rents and expenses, rates of return, and other important market determinants. Also included is a description of the Department's maintenance activities relating to parcels which were sold, renovated, demolished or newly constructed during the year. Such maintenance activities are vital in keeping the property database current.

Section II

Residential Market Review

RESIDENTIAL PROPERTY: THE VALUATION PROCESS

There are nearly 100,000 residential one-, two- and three-family dwellings and condominiums on the tax rolls in the City of Boston. The Boston Assessing Department employs a computer-assisted mass appraisal (CAMA) system which utilizes a statistical technique called multiple regression analysis (MRA) to generate assessments for all but a handful of these parcels.

The research analyst provides a range of property descriptors, called variables, which are possible candidates for inclusion in the regression model as significant predictors of value. MRA measures the contribution of specific property characteristics to sale price. Selected variables are tested and measured against actual sales to determine, first, whether the variable is significant to property sales, and second, what proportional value, when assigned to each variable, generates estimates of value which are closest to the actual sale prices.

The CAMA system searches the entire sales file for consistent patterns in the relationship between selling price and each specified variable simultaneously. This differs from a manual appraisal, where the value of one selected characteristic - for example, fireplaces - is quantified by selecting a group of parcels which are identical, except for the existence of a fireplace. Using multiple regression

analysis, the analyst can specify any combination of predictors, and the MRA model will provide the value of each variable as it relates to the overall value.

The analyst continues to apply different combinations of predictors until the model produces the most equitable values with the lowest degree of error. This final formula, developed against the sale file, can then be applied to the entire inventory database, adjusting the values to reflect the fair market value of each parcel on the appropriate assessment date.

DESCRIPTION OF RESIDENTIAL MARKET TRENDS

Residential property values have continued to show little appreciation since the Fiscal Year 1989 Revaluation. Exhibit 1 relates assessments to sale prices for one-, two- and three-family properties annually from 1986 through 1989.

Generally, the trends of 1986 and 1987 show that assessment levels trail price levels. This is not surprising since these years reflect a booming market with much real estate activity across all residential property types. State-mandated triennial revaluations succeeded in bringing assessments up to market levels. However, given the tremendous market appreciation rates of those years, the level of these assessments soon became dated. Accordingly, the trending of assessed values, in addition to legally mandated revaluations, became necessary in the years between revaluations.

In 1988, however, sales activity slowed and in 1989 prices have stabilized across the city. Exhibit 2 demonstrates this trend with quarterly statistics reported for each of the City's neighborhoods.

Exhibit 2 also illustrates that the market for residential condominiums has on the whole exhibited behavior similar to that of one-, two- and three-family homes. Contrary to common perception, this data strongly suggests that the general market did not experience significant volatility during 1989. This conclusion is also supported by Exhibit 3, which displays the median single-family home prices for three New England cities and the nation as a whole.

National Trends in Housing

After a substantial run-up in residential real estate prices during the 1980s, many indicators suggest more stable prices in the 1990s. For example:

- 10-year forecasts call for very slow growth in population and households; both are key determinants of long-term construction requirements
- there is a current lingering oversupply of new multi-family units
- demographics show that household growth will slow further as a) social trends toward delayed marriage and childbearing alter the composition of households, and b) unlike the expansion years of the 1960s, heads of households tend to be older.

Despite these price-softening factors, however, offsetting forces to this potential slide have become apparent. Among the forces are:

- the burgeoning tradeup market of the aging baby boomers (who are currently in their high-earning years)
- The rising demand for second homes by this same consumer group.

Although prices and rents have been volatile in certain regions over the last several years, home prices have nevertheless tended to rise at or above the general rate of inflation during this time. As a result, first-time prospective buyers will continue to face formidable odds when buying their first home. Although the factors which ultimately affect housing prices (i.e., land cost, construction costs, household characteristics and family income) are cyclical, the long-term trend in housing value is upward.

Housing As A Profitable Investment

For example, statistics shows that over the long term, housing has been a profitable instrument of investment. Exhibit 4 displays real growth in home equity[4] for some large metropolitan areas. Assuming historical local price

[4]Equity is defined as market value less outstanding mortgage debt. It is a function of: time of purchase, size of down payment, repayment schedule for the outstanding loan, and appreciation in housing prices.

appreciation and a 30-year fixed mortgage, a typical single-family home purchased in Boston in 1974 would have increased equity in the home by an inflation-adjusted annual rate of 15.1 percent in 1989 dollars. If the same home had been purchased in 1980, this growth rate would have been boosted to 24.6 percent. In 1986, when the Boston market was near its peak, the homeowner would have still realized equity gains of 16.9 percent in each of the last three years. A recent study reports that "these calculations suggests that, in the absence of a Houston-style recession, most owners can expect to accumulate significant home equity in the years ahead as they pay off their mortgages. Rising property values will also add to equity buildup"[5]. Even in Houston, however, this chart shows that a home purchased in 1974 would have still gained 8.1 percent real annual growth in equity.

Boston and Other Metropolitan Areas

Although housing in Boston has proved itself as a profitable investment, Boston compares unfavorably to other metropolitan areas in terms of housing affordability. 1989 median sale prices of single-family homes for large cities in 1987 through 1989 were surveyed by The National Association of Realtors and are displayed in Exhibit 5.

In 1989, Boston ranked 6th in median sale price at $181,900 (down from 5th in 1988). In conjunction with the

[5]The State of the Nation's Housing 1990, Joint Center for Housing Studies of Harvard University, 1990, p.18.

median price data, the National Association of Realtors has also recently designed and collected an "Affordability Index" for 22 of the largest cities. This statistic is based upon three components: median sale price, median family incomes, and the prevailing mortgage rates (see Exhibit 6). Within the sample size of 22, Boston's 1989 index ranks as the fifth least affordable, displaying no change in its relative ranking since the previous year.

However, the bottom portion of this Exhibit shows some improvement in affordability. A median-income household at the end of 1989 had 74.7 percent of the income needed to buy the median-priced house. This figure is up slightly from 1988 and represents a substantial improvement from the 1986 figure of 69.9 percent (not reported). Boston's affordability statistics also compare favorably with those metropolitan areas with higher median prices.

Further examination of this income component in Exhibit 7 reveals that personal income in Massachusetts in 1988 and 1987 increased at a greater rate than in both the U.S. and New England. This implies that, other things held constant, purchasing power in the Commonwealth increased more than in New England and the nation as a whole.

The mortgage rate component displayed in Exhibit 8 shows conventional home mortgage closing rates in 1989. Although slightly higher than in previous years, Boston's rates depict

a less volatile pattern during the course of 1989.[6] When combined with generally levelling home prices and rising incomes, mortgage interest rates have stabilized at a level which makes home ownership more affordable. Simultaneously, lenders have developed creative financing options that offer greater opportunities to otherwise marginal qualificants.

In addition, the Chicago Title and Trust Company surveyed recent 1989 home buyers in 18 major metropolitan areas. Exhibit 9 summarizes their findings. In all matters related to housing, Boston has consistently ranked among the least affordable. For example, Boston ranked:

- 5th in median home price (down from last year's 4th)
- 7th in percentage of adjustable-rate mortgage financing (down from last year's 4th)
- 9th in average age of first time home buyer (down from last year's 3rd)
- 3rd in average savings time for down payment (down from last year's 2nd)

The aggregate changes in these components, however, reflect slightly greater affordability in 1989 from 1988 and corroborates the overall stabilizing of home prices in Boston. Any further appreciation of residential properties will require a significant change in one or more of the previously described affordability factors.

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[6]10 percent differential between highest and lowest rates of 1989 versus 13 percent differential of similar 1988 figures.

FISCAL YEAR 1991 RESIDENTIAL ASSESSMENTS

As stated, sales show that the Boston residential and condominium marketplace has stabilized since the Revaluation of Fiscal Year 1989. For analysis purposes, the Department has combined its 103 residential assessment and 25 condominium assessment districts into the 16 Boston Redevelopment Authority neighborhoods (see Exhibit 10). This grouping effectively increases confidence in the statistical ratios by expanding the sample size of sales per neighborhood.

After stratification by property type and neighborhood, the 1989 sales were compared with their FY91 assessments in order to analyze the following statistics:

*ASSESSMENT PRICE RATIO (APR), which measures the level of assessments by comparing the Fiscal Year 1991 assessed values to Calendar Year 1989 sale prices. An APR over 1.0 indicates properties are assessed above market levels, while an APR under 1.0 indicates properties are assessed below market levels. As the market has been relatively stable since the latest revaluation this range should be conservative. Therefore, acceptable ranges of neighborhood median assessed value to price ratios should be approximately 0.9 to 1.05.

This report was further refined to contain two additional statistics:

*COEFFICIENT OF DISPERSION (COD), which measures the uniformity and quality of assessments. This statistic is defined as the average absolute deviation divided by the median. A COD of 10% for the singe-family class is considered acceptable under the Massachusetts Department of Revenue standards[7].

*PRICE-RELATED DIFFERENTIAL (PRD), which measures the progressivity or regressivity of assessments. A PRD of greater than 1.0 indicates lower-prices properties are assessed at a higher level (a regressive situation) while a PRD of less than 1.0 indicates that higher-priced properties are assessed at a higher level (a progressive scenario). This statistic is therefore used to evaluate the potential assessment differences within the sale price range. Acceptable ranges are 0.95 to 1.05.

These three statistics allow us to observe two important criteria in determining whether a complete residential revaluation is necessary. These are:

(1) the level of assessment, as reflected by the assessment-to-sale ratios in comparison with Boston's 100%-mandated assessment level, and

(2) the uniformity and quality of assessment, as

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[7]Since the COD is highly sensitive to extreme values, it is less meaningful when the number of sales in any given region is less than 25.

reflected by the COD which measures relative dispersion of the ratios in each of the sixteen neighborhoods, and the PRD which measures the progressivity or regressivity of assessments, i.e., the relationship between higher-priced properties and lower-priced properties.

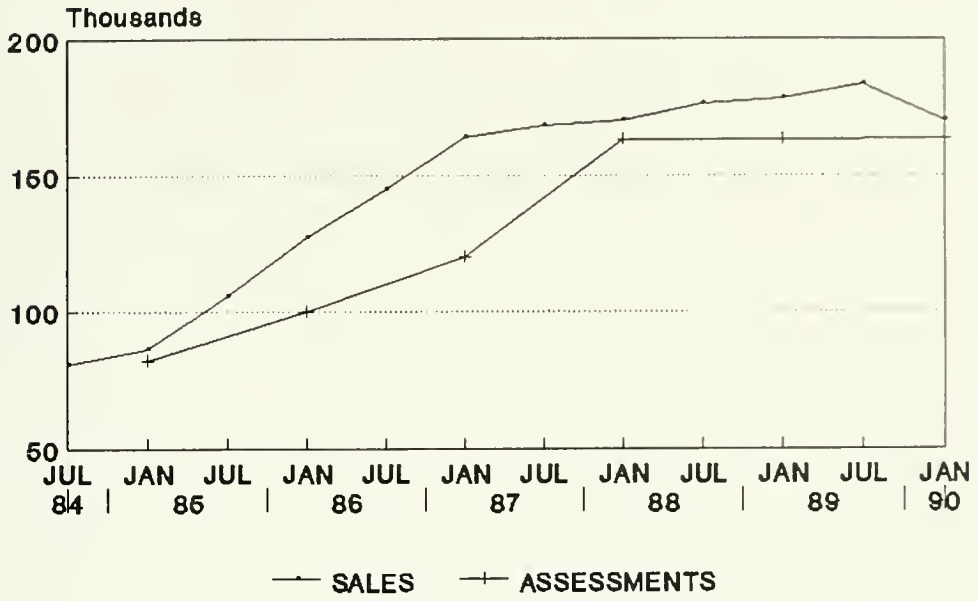
Summary of Findings

The citywide statistics indicate that the current assessed values for each residential property type fall within acceptable ranges (see Exhibit 11) . The APRs suggest that the current assessed values closely reflect current market conditions. The CODs for each property type are within Massachusetts Department of Revenue guidelines. Finally, the PRD indicates assessment levels are nearly proportional between higher- and lower-priced properties.

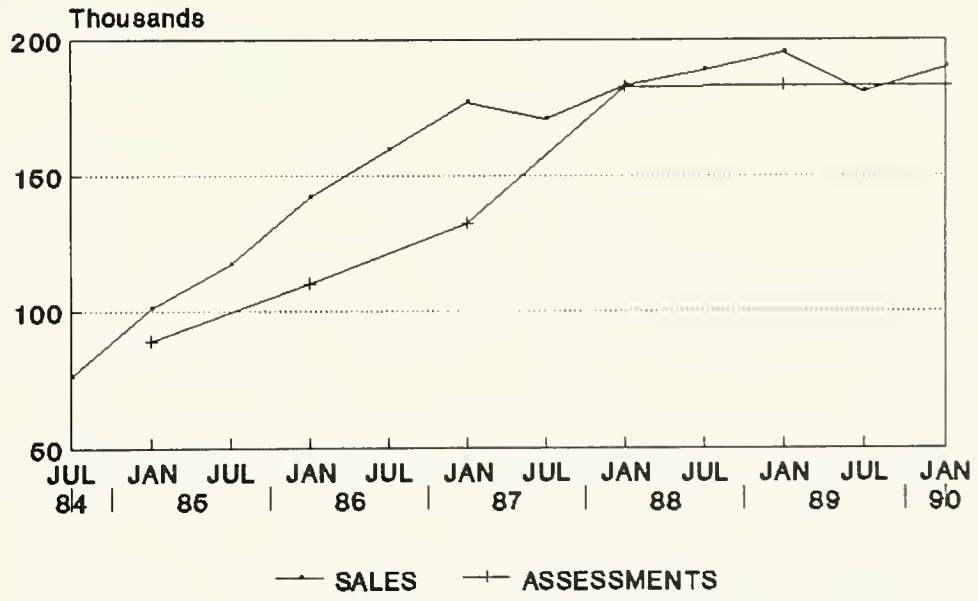
A comparison of these statistics indicates virtually no variation across the city, reflecting uniformity in assessment levels. Therefore, in light of the myriad of statistical market data, which is the measurement tool for determining the necessity of property revaluation or market indexing, the Assessing Department concluded that neither revaluation nor indexing are appropriate for Fiscal Year 1991[8].

[8]Accordingly, assessed values for Fiscal Year 1991 will remain the same as those in Fiscal Year 1990. Exhibit 12 depicts average assessed values by property type for each of the sixteen neighborhoods.

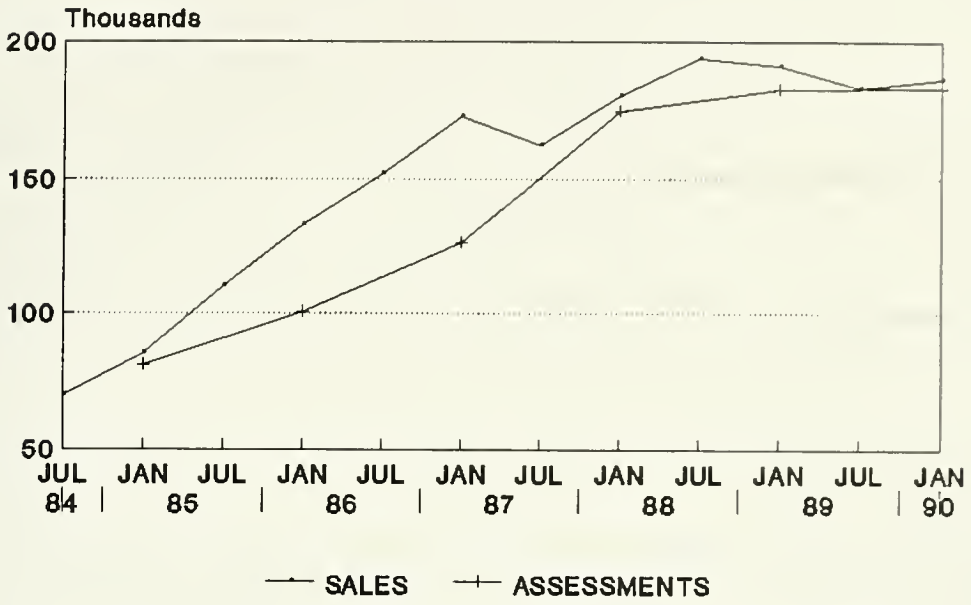
AVERAGE ASSESSMENT AND SALE PRICE
SINGLE-FAMILY



TWO-FAMILY

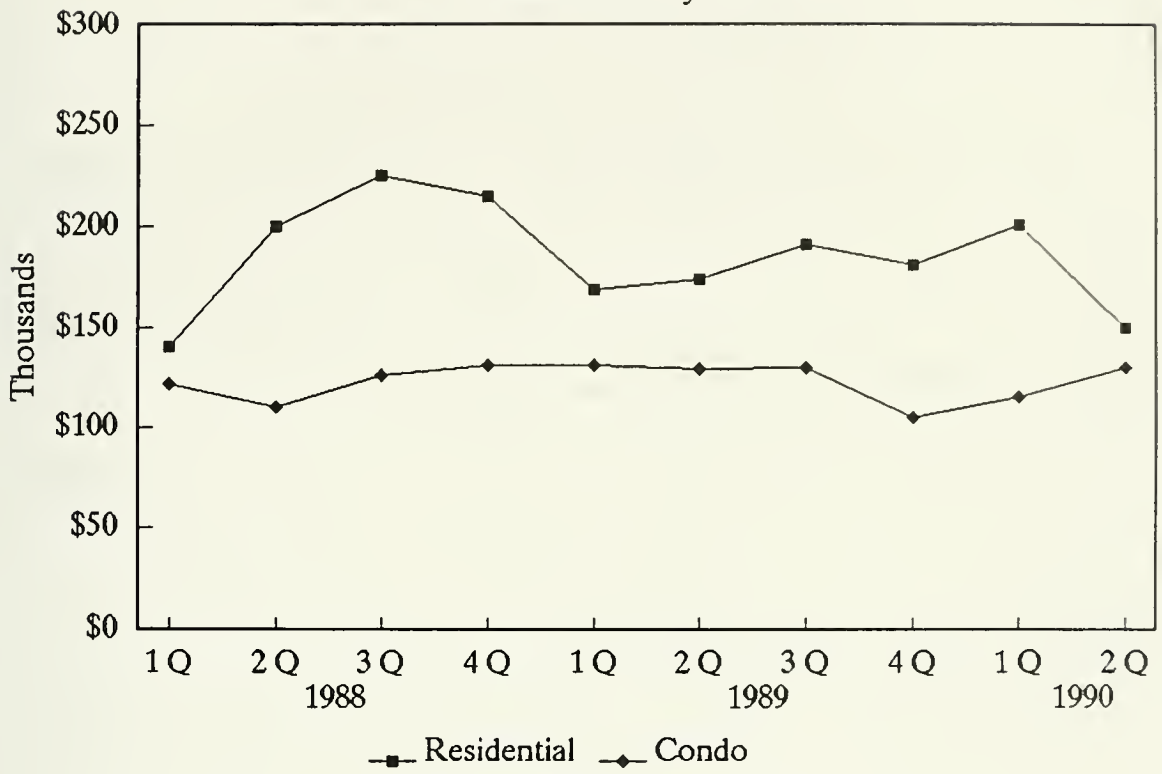


AVERAGE ASSESSMENT AND SALE PRICE
THREE-FAMILY



ALLSTON

Median Sales by Quarter

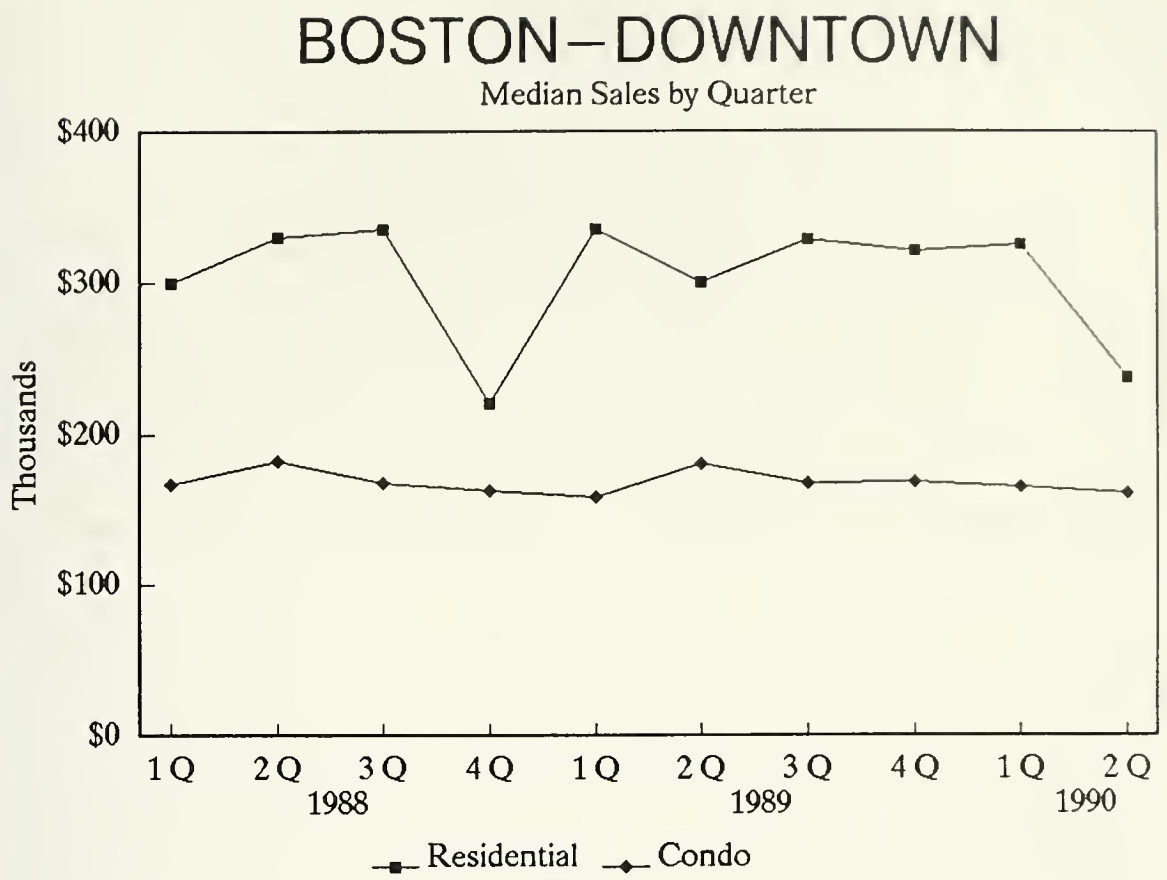


M E D I A N P R I C E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	140,000	200,000	225,000	215,000	169,000	174,000	191,000	181,000	201,000	150,000
Condo	121,808	110,000	126,000	131,000	131,000	129,000	130,000	105,000	115,000	130,000
All Sales	121,808	130,000	155,000	132,800	136,000	139,900	136,000	135,000	118,500	135,000

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	5	10	18	10	15	15	12	6	13	12
Condo	22	45	29	33	28	32	35	18	18	20
All Sales	27	55	47	43	43	47	47	24	31	32



M E D I A N P R I C E S

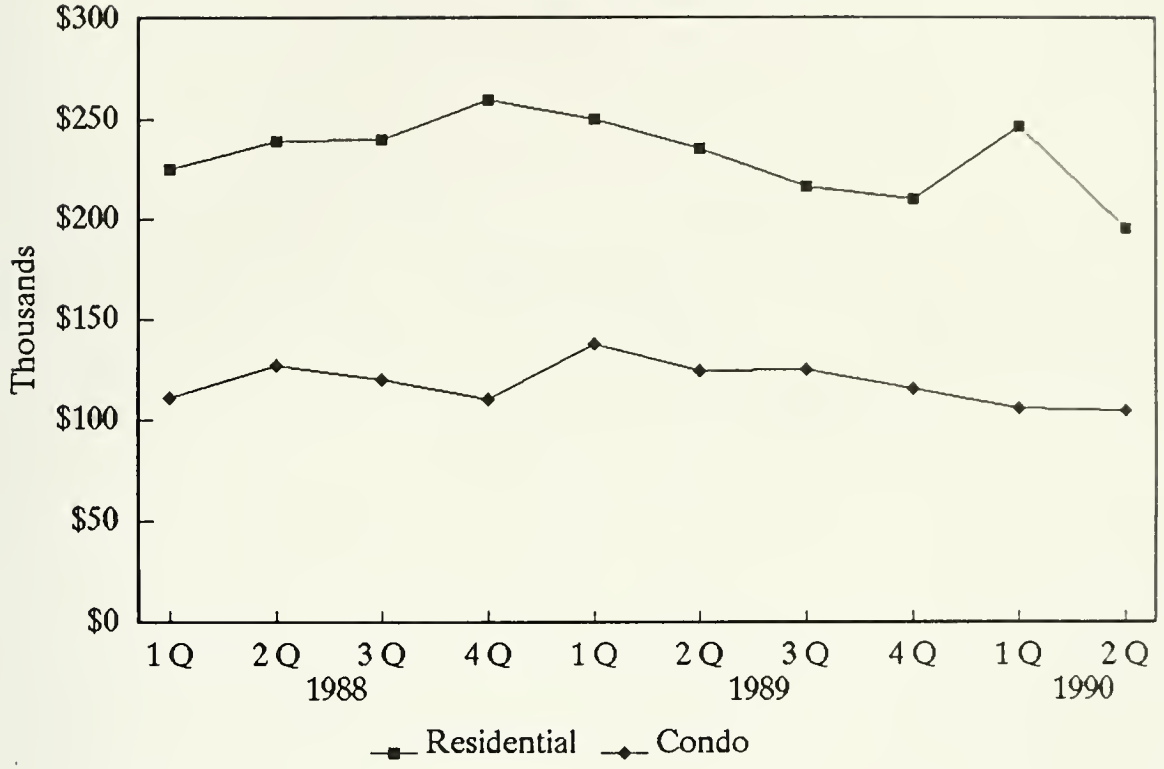
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	300,000	330,000	335,000	220,000	335,000	300,000	328,400	320,000	325,000	237,000
Condo	166,000	181,500	167,500	162,000	158,000	180,000	167,000	168,000	165,000	160,500
All Sales	171,000	188,000	171,000	165,000	164,000	185,000	170,000	171,000	180,000	168,000

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	43	78	69	42	46	58	54	54	59	29
Condo	379	553	592	364	313	460	444	284	268	350
All Sales	422	631	661	406	359	518	498	338	327	379

BRIGHTON

Median Sales by Quarter



M E D I A N P R I C E S

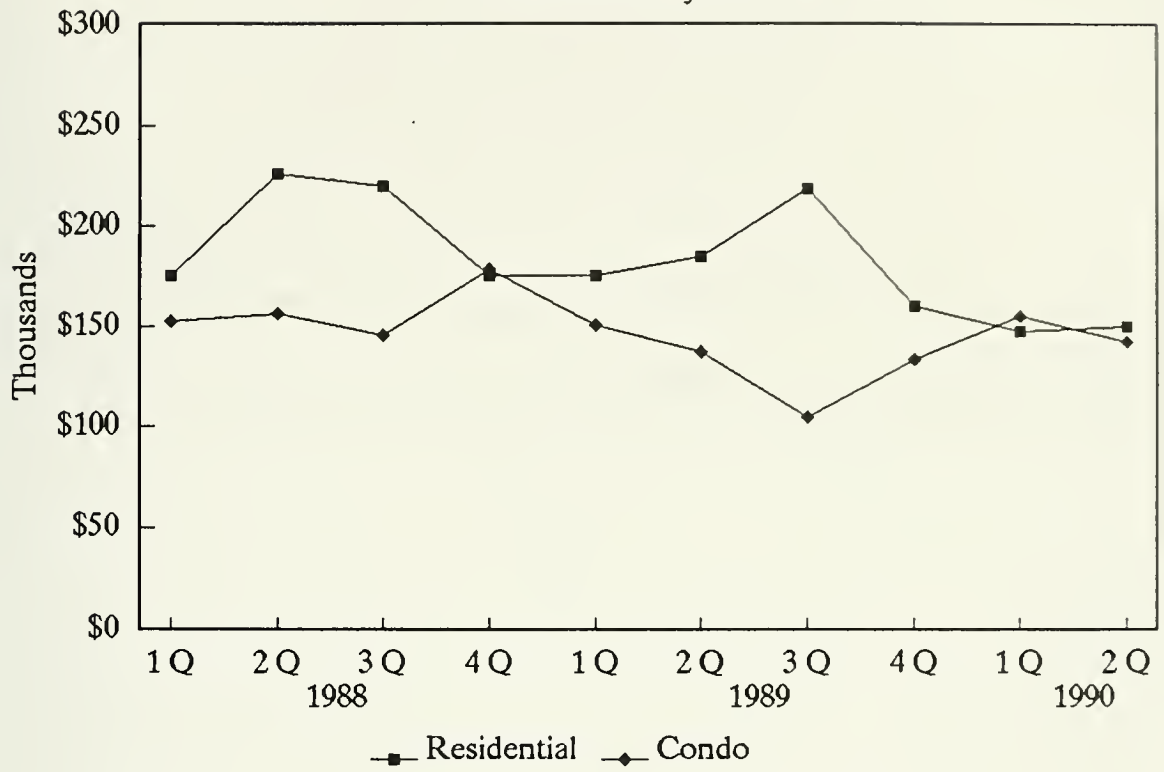
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	225,000	239,000	239,500	259,700	250,000	235,000	216,000	210,000	246,000	195,100
Condo	110,500	127,000	120,000	110,000	137,300	124,000	125,000	115,000	105,900	104,500
All Sales	114,510	137,500	127,000	118,500	140,000	133,000	133,000	130,000	150,000	130,000

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	27	35	40	34	36	35	35	38	24	45
Condo	155	208	231	126	101	109	118	61	83	67
All Sales	182	243	271	160	137	144	153	99	107	112

CHARLESTOWN

Median Sales by Quarter



M E D I A N P R I C E S

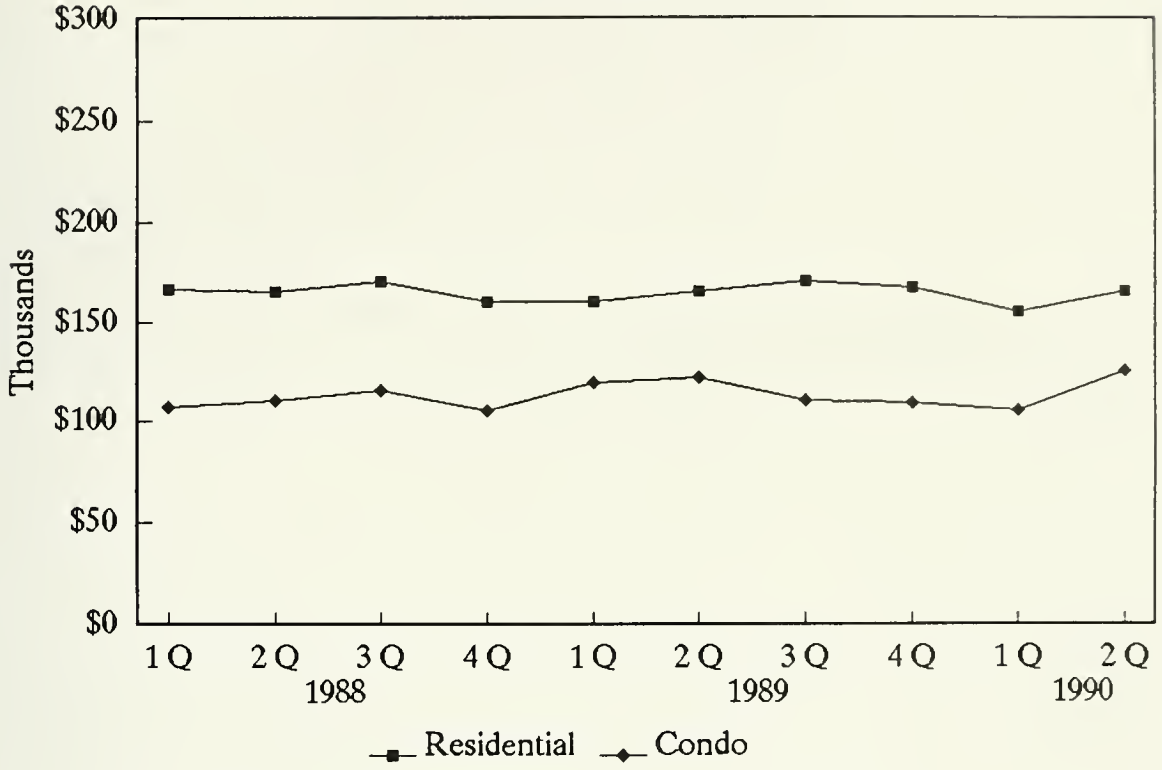
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	175,000	226,500	220,000	175,000	175,000	185,000	218,400	160,000	147,000	150,000
Condo	152,000	156,000	145,000	178,500	150,066	136,800	104,500	133,000	155,000	142,000
All Sales	155,000	165,000	155,320	177,250	150,066	145,000	129,000	150,000	150,000	148,500

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	17	22	21	16	30	20	19	23	26	27
Condo	37	50	58	34	19	45	63	35	16	28
All Sales	54	72	79	50	49	65	82	58	42	55

DORCHESTER

Median Sales by Quarter



M E D I A N P R I C E S

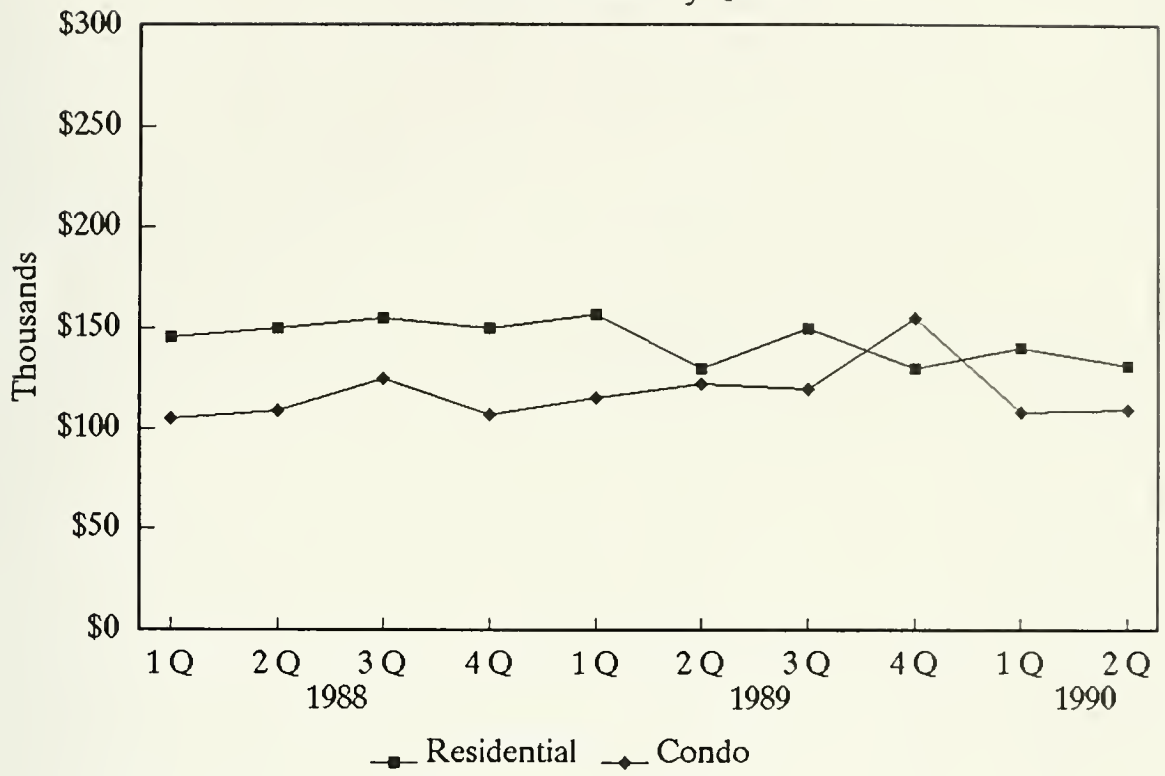
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	166,000	165,000	169,900	160,000	160,000	165,000	170,000	167,000	155,000	165,000
Condo	107,000	110,000	115,000	105,000	119,175	121,900	110,000	109,000	105,000	125,000
All Sales	140,000	159,000	155,000	150,000	155,000	155,000	159,000	159,900	150,000	155,000

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	186	258	284	273	209	250	238	236	187	187
Condo	72	50	80	60	49	76	61	47	40	33
All Sales	258	308	364	333	258	326	299	283	227	220

EAST BOSTON

Median Sales by Quarter

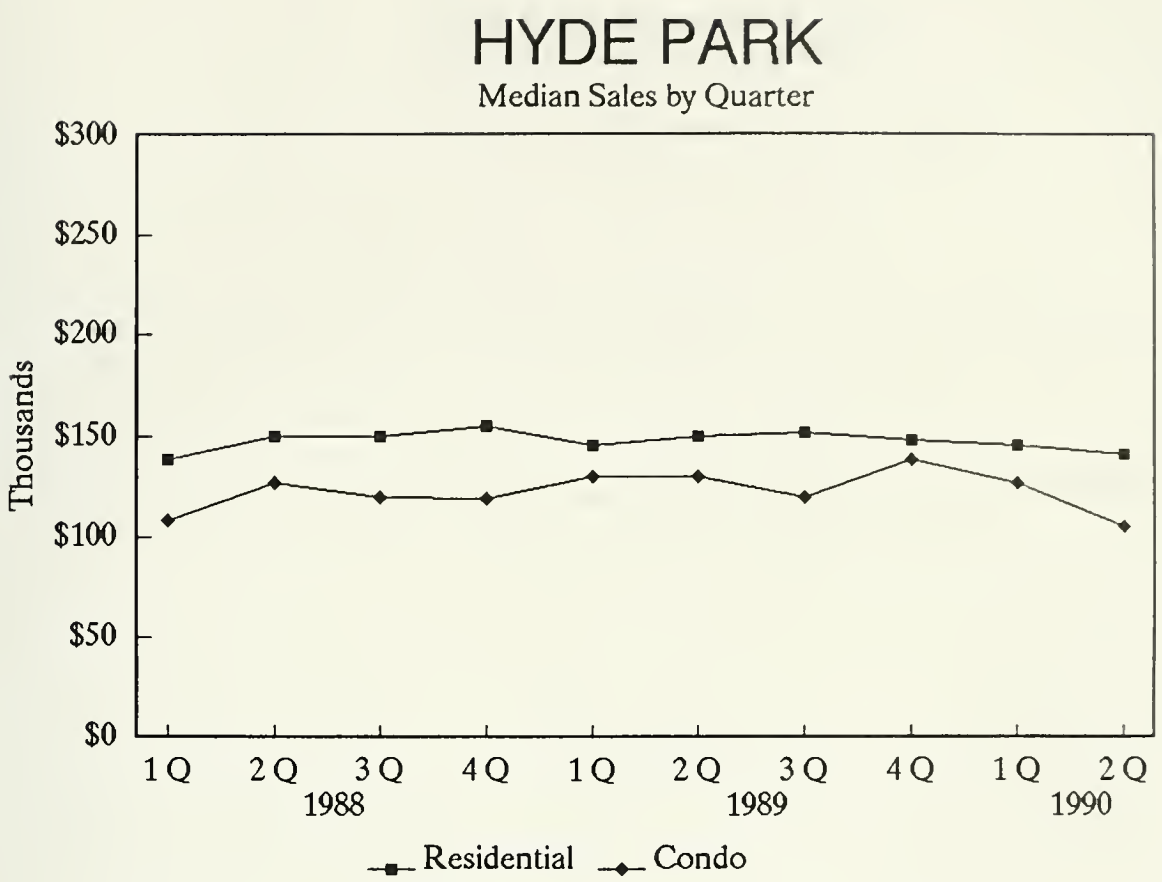


M E D I A N P R I C E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	145,000	150,000	155,000	150,000	157,000	130,000	150,000	130,000	140,000	131,000
Condo	105,000	109,000	125,000	107,000	115,000	122,000	120,000	155,000	108,000	109,600
All Sales	112,000	135,000	148,000	128,000	145,000	129,500	125,700	135,000	129,000	128,100

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	54	50	56	52	40	41	47	50	42	35
Condo	41	24	10	28	19	29	30	24	18	12
All Sales	95	74	66	80	59	70	77	54	60	47



M E D I A N P R I C E S

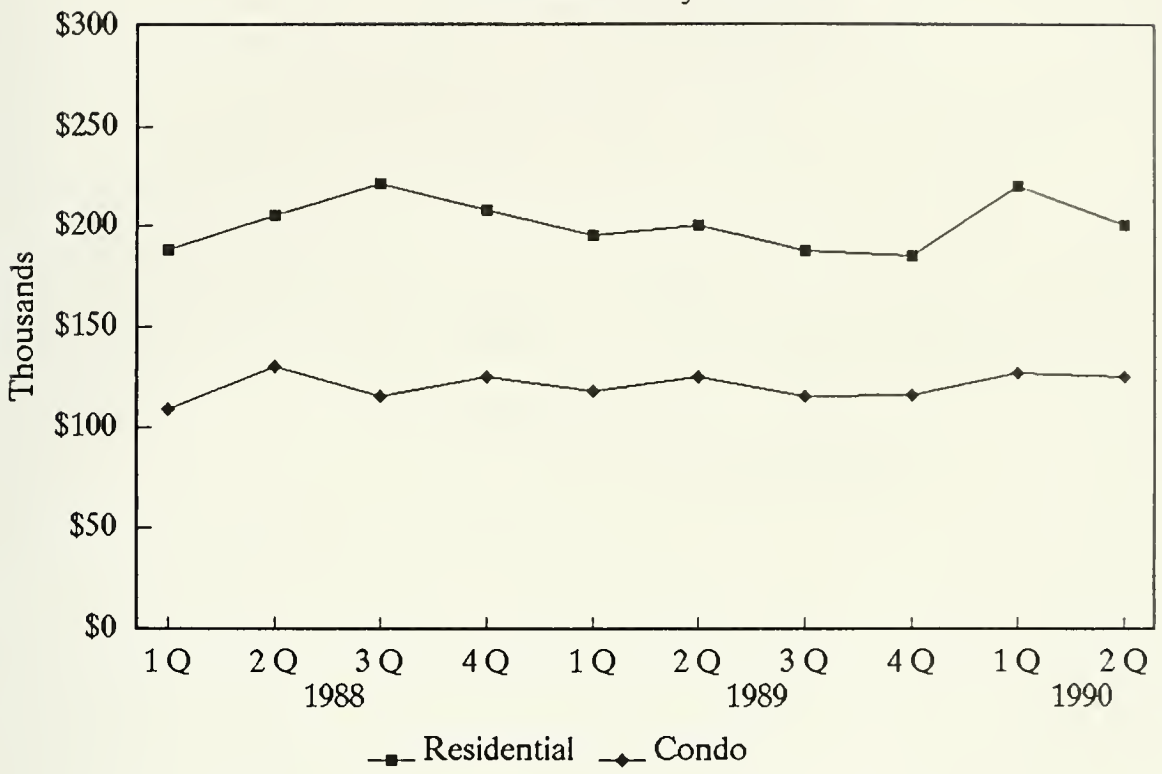
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	138,000	150,000	150,000	155,000	145,000	149,500	151,500	148,000	145,000	140,920
Condo	108,200	126,700	120,000	119,291	130,000	130,000	119,900	138,000	127,000	105,000
All Sales	135,000	145,900	142,000	152,000	140,000	145,000	150,000	145,000	141,000	140,920

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	50	74	69	73	53	75	67	74	56	46
Condo	13	13	17	10	7	13	9	7	11	5
All Sales	63	87	86	83	60	88	76	81	67	51

JAMAICA PLAIN

Median Sales by Quarter



M E D I A N P R I C E S

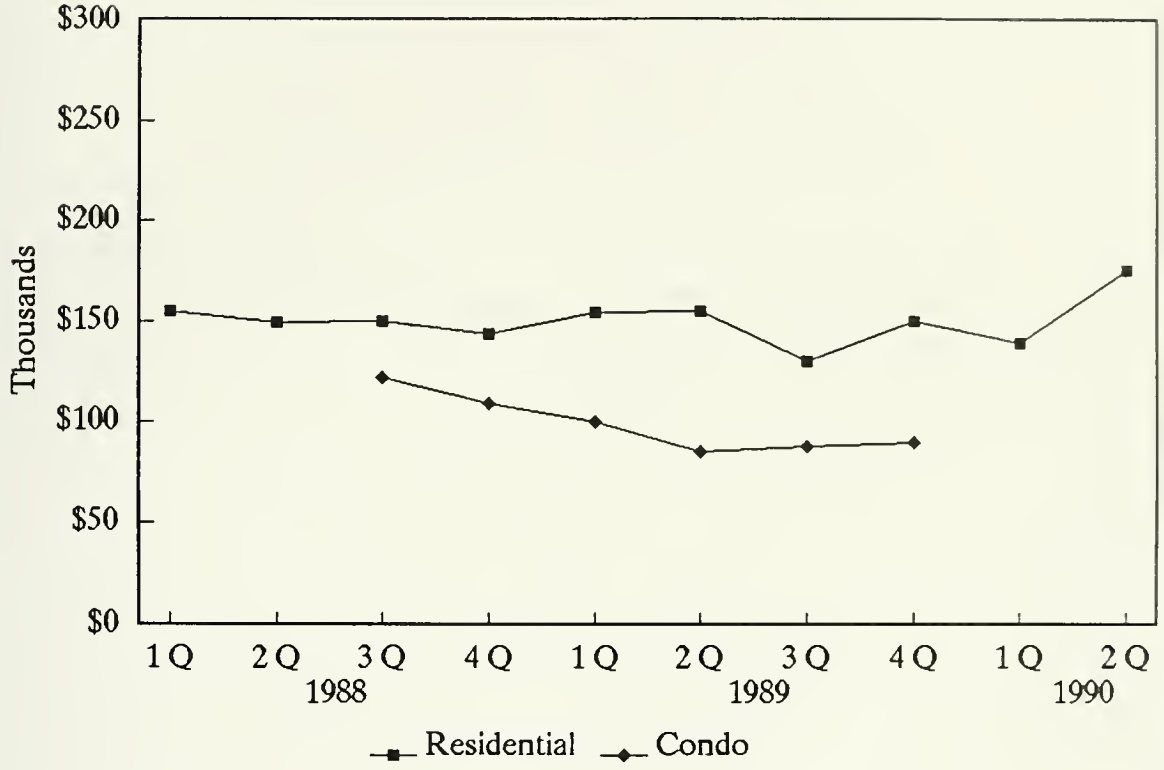
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	188,000	205,000	221,000	208,000	195,000	200,000	187,500	185,000	220,000	200,000
Condo	109,000	130,000	115,000	125,000	118,000	125,000	115,000	116,000	126,500	125,000
All Sales	130,000	159,000	165,000	161,000	160,000	160,000	161,500	165,900	180,000	151,000

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	52	72	90	53	61	64	60	57	34	44
Condo	59	76	86	57	40	63	51	39	27	35
All Sales	111	148	176	110	101	127	111	96	61	79

MATTAPAN

Median Sales by Quarter



M E D I A N P R I C E S

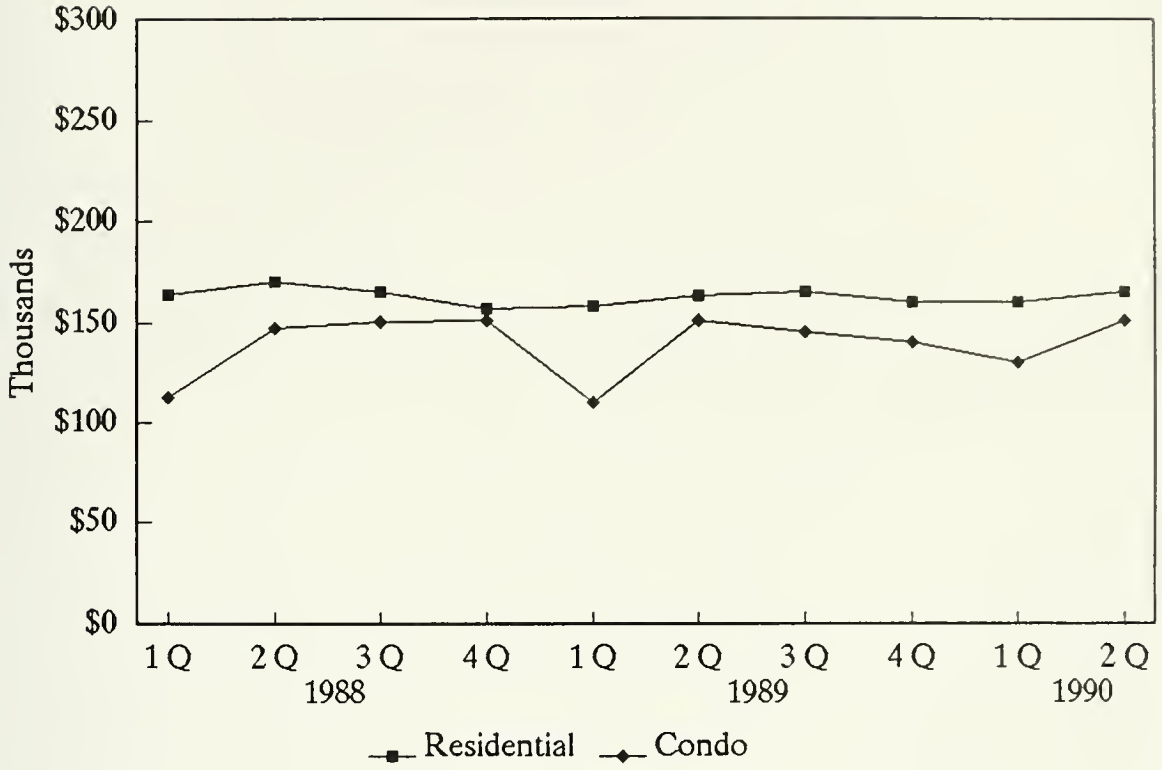
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	155,000	149,000	150,000	143,000	154,000	155,000	129,900	150,000	139,000	175,000
Condo			121,500	109,000	100,000	85,000	88,000	89,500		
All Sales	155,000	149,000	140,000	139,000	148,000	147,000	128,000	142,250	139,000	171,900

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	29	44	36	41	33	28	31	32	28	35
Condo	0	0	1	4	4	3	3	6	1	2
All Sales	29	44	37	45	37	31	34	38	29	37

ROSLINDALE

Median Sales by Quarter



M E D I A N P R I C E S

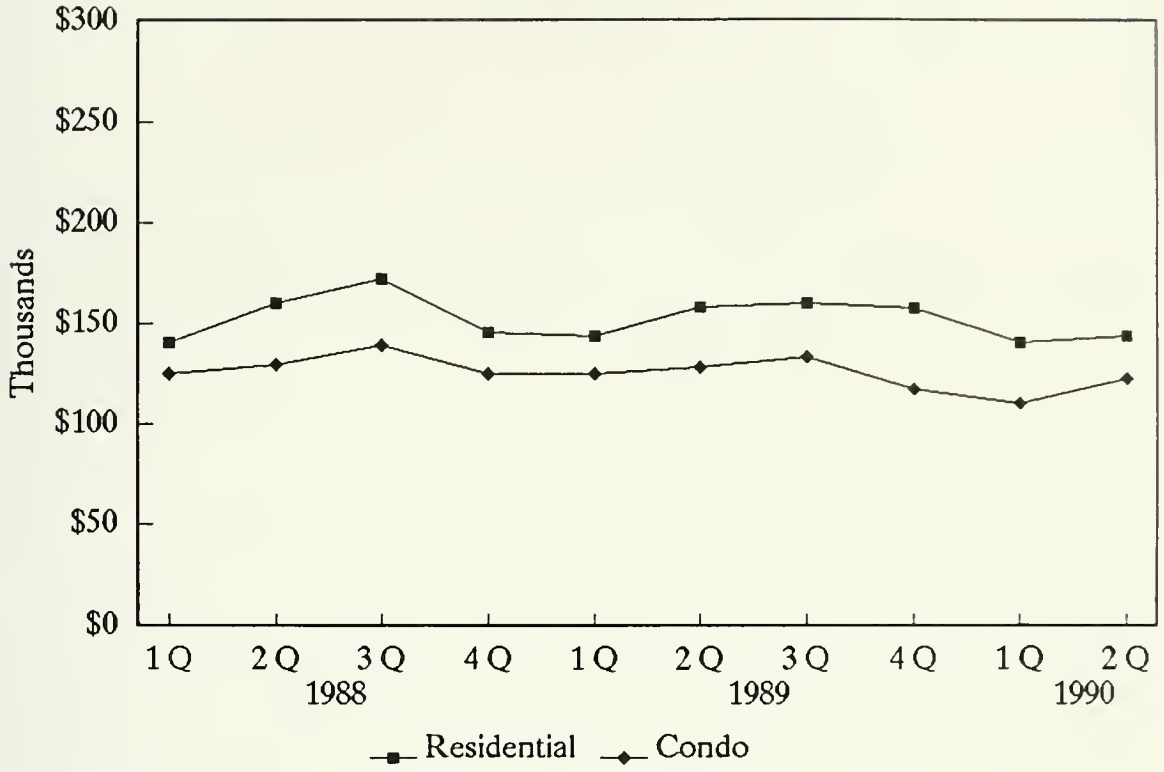
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	164,000	170,000	165,000	157,000	158,000	163,000	165,000	160,000	160,000	165,000
Condo	112,500	146,900	150,400	151,000	110,000	150,900	145,000	140,000	129,900	151,000
All Sales	145,000	150,400	156,000	155,000	150,000	159,000	157,000	155,000	155,000	161,000

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	37	68	83	52	61	61	56	55	47	37
Condo	29	45	22	12	28	13	9	18	16	15
All Sales	66	113	105	64	89	74	65	73	63	52

ROXBURY

Median Sales by Quarter



M E D I A N P R I C E S

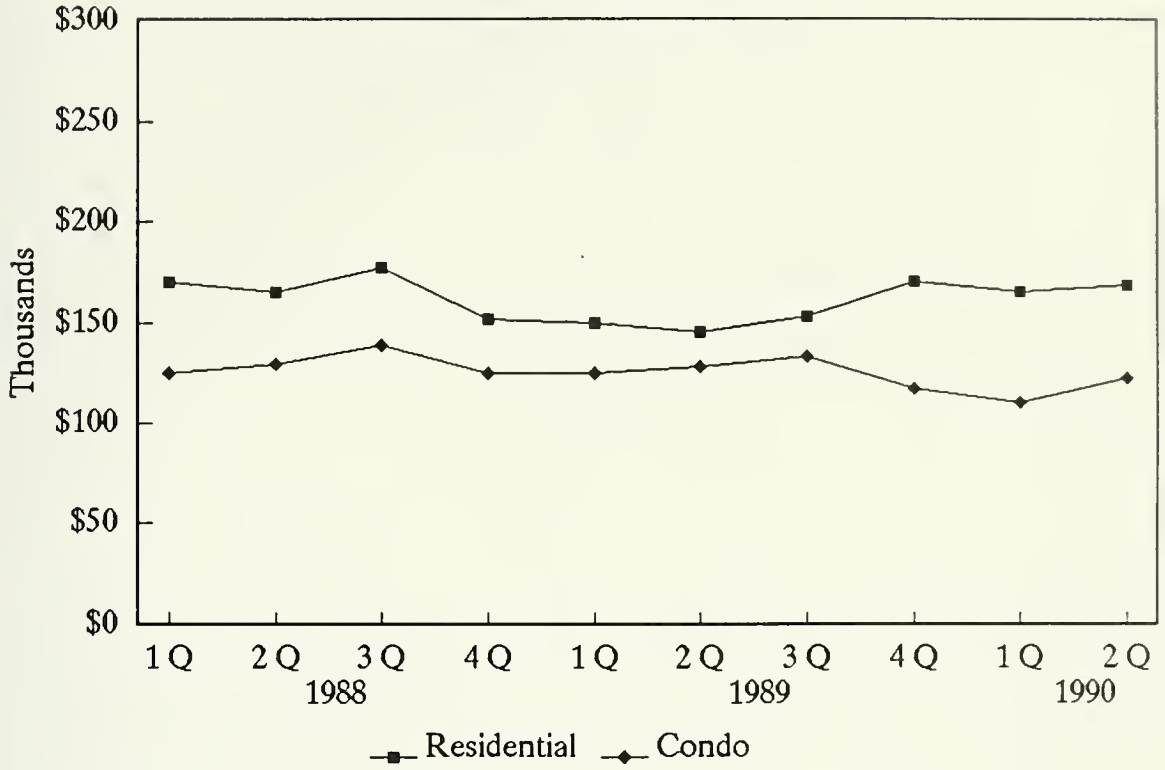
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	140,000	160,000	172,000	145,000	143,000	158,200	160,000	157,500	140,000	143,000
Condo	99,000	115,000	138,500	99,900	105,500	105,000	105,000	96,150	96,150	135,000
All Sales	130,000	135,000	149,500	133,000	140,000	135,000	150,000	130,000	120,000	142,500

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	56	59	53	52	49	54	49	40	52	41
Condo	20	14	20	11	33	16	11	27	22	15
All Sales	76	73	73	63	82	70	60	67	74	56

SOUTH BOSTON

Median Sales by Quarter



M E D I A N P R I C E S

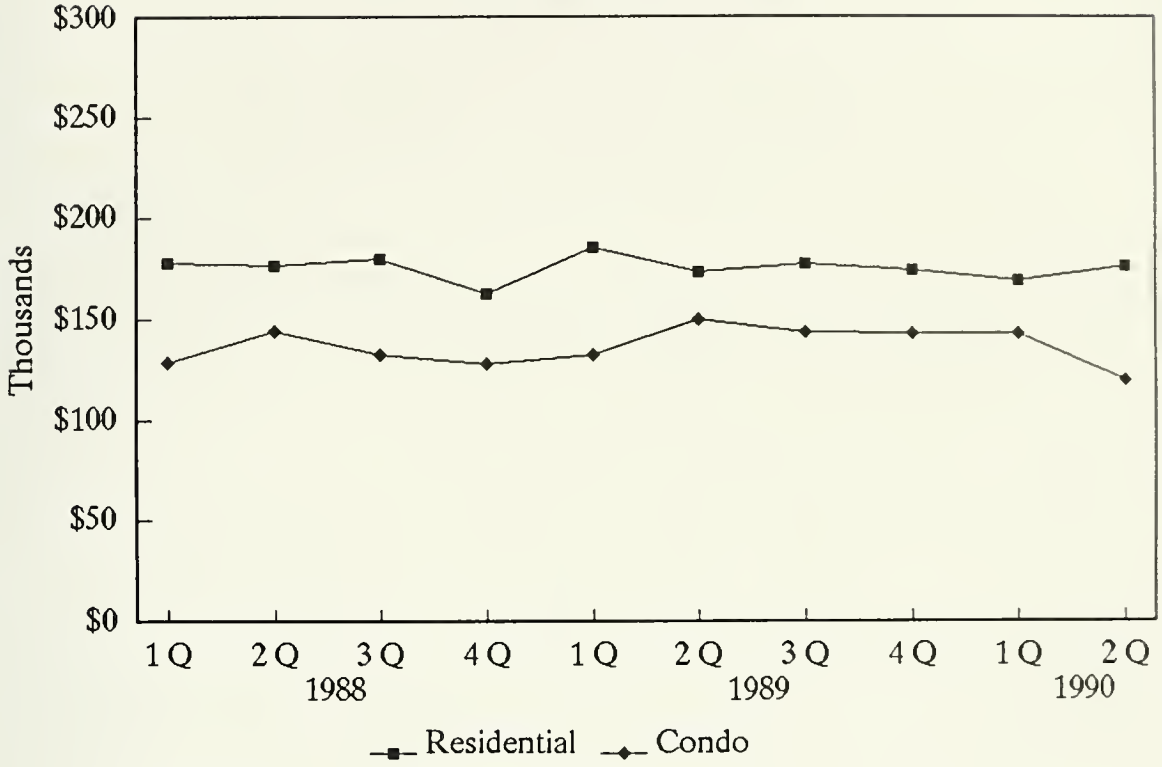
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	170,000	165,000	177,000	151,500	150,000	145,000	153,000	170,000	165,000	168,000
Condo	125,000	129,500	139,000	125,000	125,000	128,000	132,900	117,000	110,000	122,200
All Sales	135,000	147,000	150,000	140,000	136,000	135,000	136,500	128,000	139,000	135,000

N U M B E R O F S A L E S

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	53	58	41	63	41	44	47	36	145	42
Condo	45	35	41	36	26	41	69	44	26	23
All Sales	98	93	82	99	67	85	116	70	51	65

WEST ROXBURY

Median Sales by Quarter

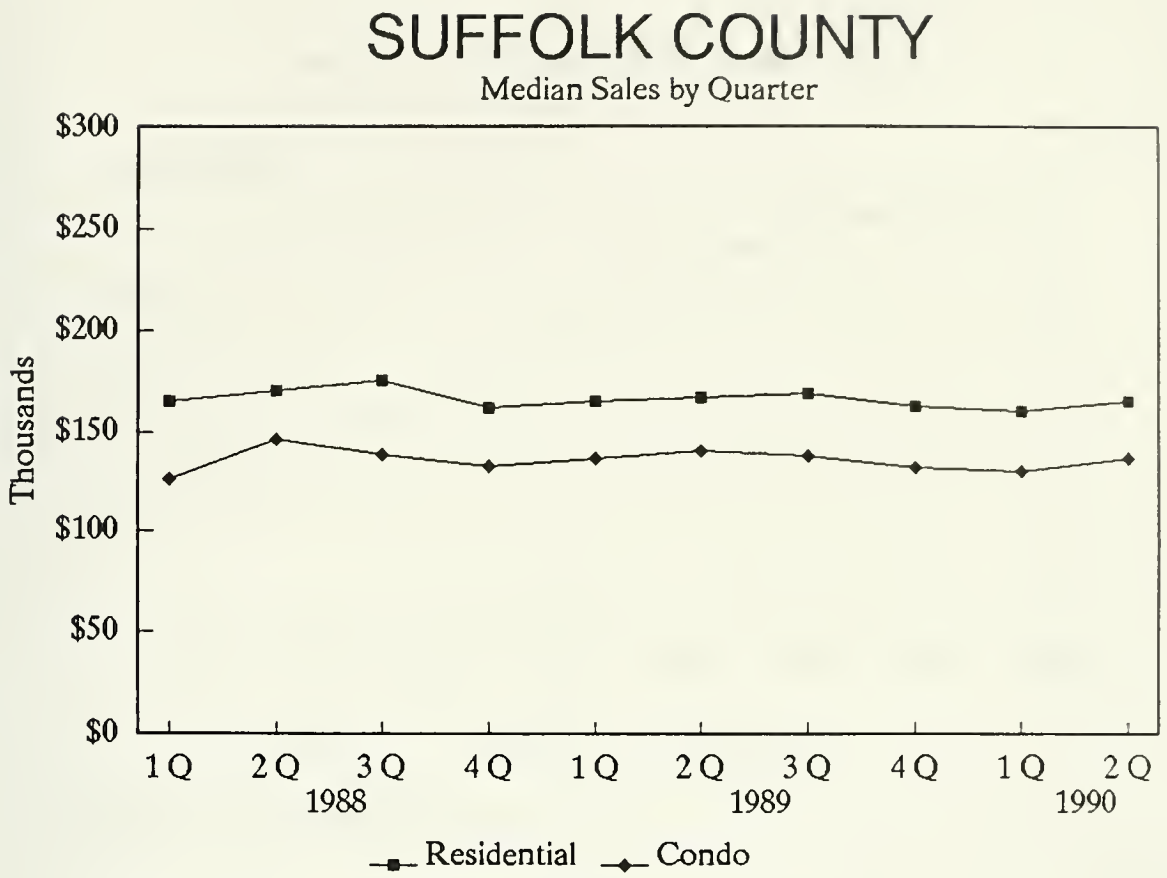


MEDIAN PRICES

	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	177,500	176,500	180,000	162,300	185,500	173,000	177,000	174,000	169,000	176,000
Condo	128,594	143,900	132,500	128,000	132,500	150,000	143,000	142,900	142,900	120,000
All Sales	158,000	160,000	161,000	152,900	167,000	168,000	168,000	171,000	158,000	170,000

NUMBER OF SALES

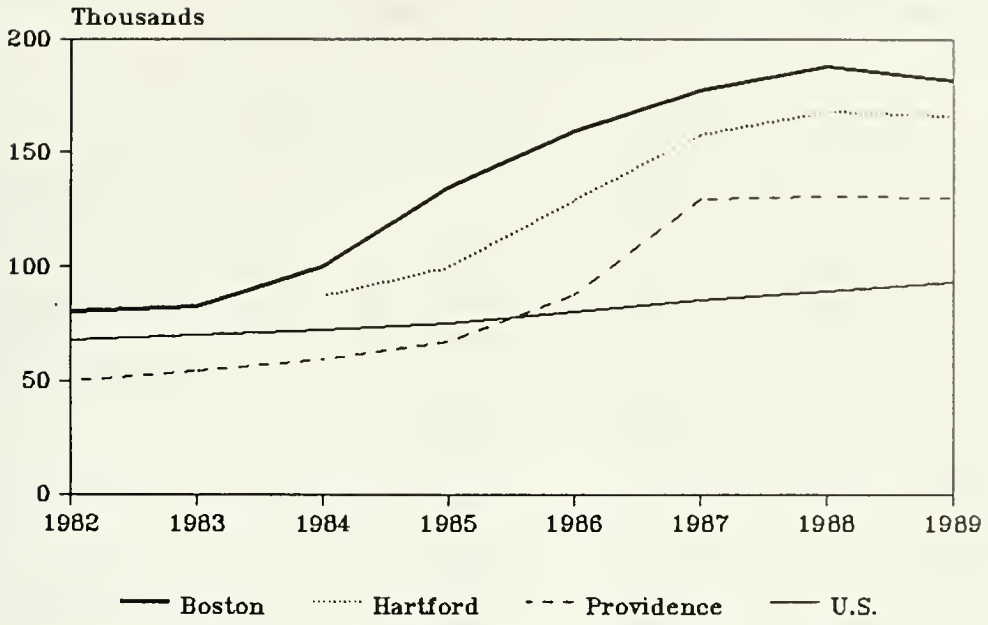
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	70	112	110	71	78	86	101	84	75	70
Condo	36	52	61	27	23	35	40	43	30	25
All Sales	106	164	171	98	101	121	141	127	105	95



M E D I A N P R I C E S

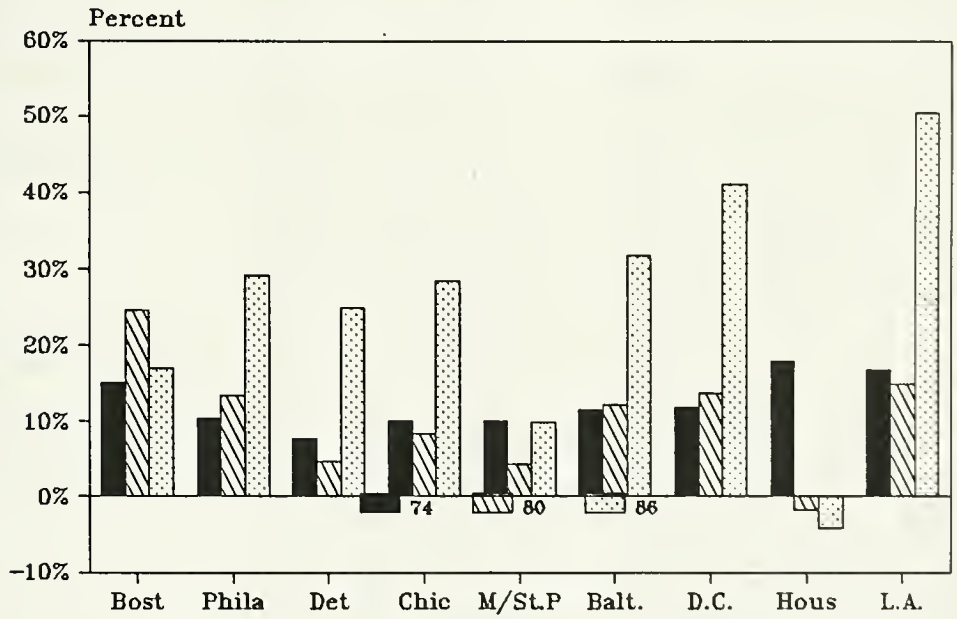
	1988				1989				1990	
	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
Residential	164,900	170,000	175,000	162,000	164,900	167,000	168,800	162,500	160,000	165,000
Condo	126,000	146,000	138,146	132,500	136,160	140,000	137,800	132,000	130,000	136,500
All Sales	142,000	156,000	154,900	150,000	150,000	155,000	154,000	150,000	150,000	150,000

MEDIAN SINGLE-FAMILY HOME PRICES
1982-1989



SOURCE: National Association of Realtors

REAL GROWTH IN HOME EQUITY



SOURCE: Joint Center for Housing Studies
Harvard University
Cambridge, MA

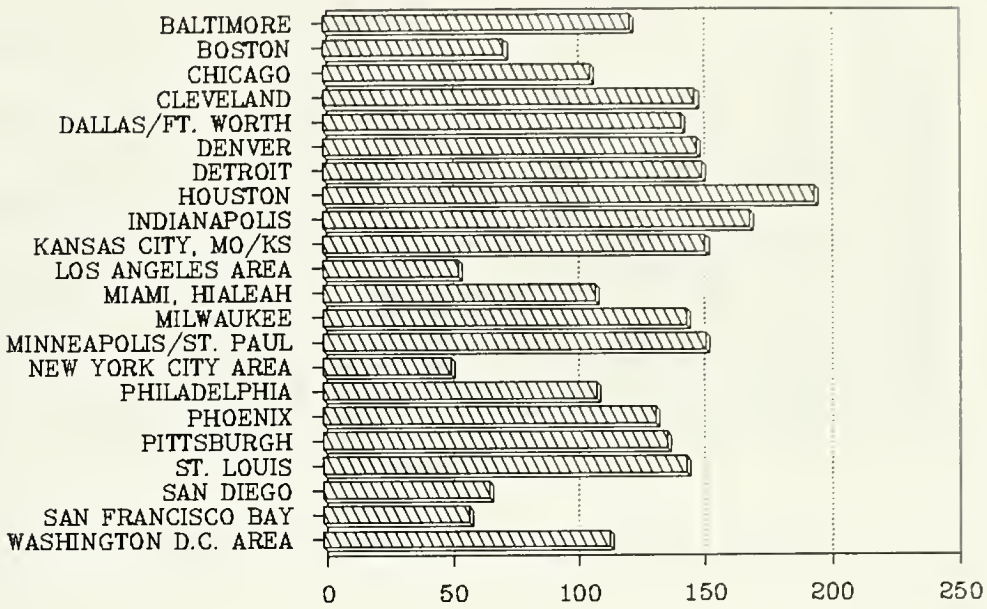
MEDIAN SALES PRICES OF EXISTING SINGLE-FAMILY HOMES
FOR METROPOLITAN AREAS*
(In Thousands of Dollars)

METROPOLITAN AREA	YEARS			QUARTERS				
	1987	1988	1989	1988	1989			
				IV	I	II	III	IV
Akron	57.1	59.9	64.5	58.4	56.0	62.9	66.6	69.7
Albany/Schenectady/Troy	86.4	92.2	104.9	100.1	102.1	104.2	108.6	103.6
Albuquerque	82.6	80.4	83.0	75.8	82.0	84.5	83.5	81.7
Orange County (Anaheim/ Santa Ana)	167.3	206.9	245.3	226.4	237.8	246.3	249.1	247.9
Atlanta	---	---	84.0	80.5	80.3	84.1	85.6	85.0
Baltimore	81.1	88.7	96.3	89.6	92.2	95.1	98.9	97.6
Baton Rouge	67.8	64.7	63.8	64.8	61.1	64.7	63.9	64.3
Birmingham	71.6	75.7	78.5	74.9	77.3	77.8	80.3	78.1
BOSTON	177.2	181.2	181.9	179.3	176.3	186.2	183.3	180.0
Buffalo/Niagara Falls	56.7	65.6	72.5	67.5	68.7	71.5	74.2	75.7
Charleston	72.7	73.1	74.5	71.3	72.4	75.0	77.1	72.9
Charlotte	---	---	88.1	80.5	85.2	86.5	89.5	90.5
Chattanooga	59.0	63.5	65.4	64.9	65.6	64.6	64.9	66.7
Chicago	90.8	98.9	107.0	98.4	99.6	105.0	111.4	109.3
Cincinnati	66.1	69.7	75.8	70.2	72.8	76.6	77.8	74.8
Cleveland	68.1	69.2	75.2	69.3	69.4	76.2	77.9	74.2
Columbia	68.4	69.7	73.9	68.7	71.9	73.5	74.9	74.6
Columbus	68.7	72.6	77.9	74.6	73.9	76.7	81.3	77.4
Corpus Christi	65.9	64.9	64.9	66.5	63.2	64.4	66.7	64.5
Dallas	90.8	90.8	92.4	87.0	89.8	92.4	94.7	92.2
Daytona Beach	60.2	62.6	63.4	64.1	59.5	63.0	65.3	65.8
Dayton/Springfield	59.4	63.3	68.7	63.6	64.4	69.0	72.2	67.4
Denver	88.9	81.8	85.5	79.7	80.8	84.2	88.5	86.8
Des Moines	55.6	55.8	57.5	54.8	56.0	57.1	59.2	57.4
Detroit	65.6	73.1	73.7	73.4	70.9	73.1	76.2	73.6
El Paso	59.2	59.6	63.1	58.8	57.2	64.2	65.4	64.2
Ft.Lauderdale/Hollywood/ Pompano Beach	79.6	81.1	83.9	81.4	82.1	81.4	83.7	88.9
Ft. Worth	80.0	73.3	79.9	73.6	80.9	80.9	80.9	77.1
Grand Rapids	53.5	57.9	64.2	59.2	59.2	65.0	65.6	67.2
Greenville/Spartanburg	64.2	65.9	68.6	64.5	60.8	69.1	71.6	71.0
Hartford	157.4	167.6	165.9	165.0	165.5	165.1	168.5	164.2
Honolulu	186.0	215.1	267.6	225.0	245.0	259.0	275.0	280.9
Houston	65.9	61.8	66.7	56.8	62.9	68.7	70.9	62.6
Indianapolis	62.5	66.1	71.2	66.6	68.0	70.9	72.8	72.2
Jacksonville	65.1	67.7	69.3	67.9	65.9	67.8	71.8	70.8
Kansas City	69.8	70.5	71.6	69.3	73.8	72.6	69.1	70.9
Knoxville	65.4	67.0	71.1	66.9	69.8	70.3	73.2	70.5
Lansing/East Lansing	54.5	56.6	59.8	56.2	57.9	59.4	61.5	60.4
Las Vegas	77.0	78.8	85.7	80.2	80.5	86.1	87.3	87.6
Lexington/Fayette	72.5	73.5	77.0	75.4	74.9	78.3	78.2	75.9
Little Rock/N.Little Rock	63.1	63.9	63.7	63.8	63.4	62.9	64.3	64.1

METROPOLITAN AREA	YEARS 1987	1988	1989	QUARTERS 1988 IV	1989 I	II	III	IV
Los Angeles	147.7	179.4	215.5	191.1	201.0	218.0	224.6	217.0
Louisville	51.7	54.5	58.4	55.1	57.6	58.4	59.3	58.0
Madison	69.2	72.0	76.5	70.7	74.7	76.8	77.3	76.6
Memphis	75.0	76.3	78.1	74.5	77.0	78.0	78.3	79.1
Miami/Hialeah	81.1	82.9	86.9	84.0	83.0	88.1	86.6	89.0
Milwaukee	70.5	74.5	79.6	73.1	76.0	81.2	80.0	79.7
Minneapolis/St. Paul	80.5	85.2	87.2	87.2	85.9	87.0	87.8	88.3
Mobile	55.6	53.0	56.7	55.8	55.1	55.4	58.9	56.4
Montgomery	64.8	64.5	68.8	63.6	66.0	69.7	70.0	68.8
Nashville/Davidson	75.5	77.6	79.9	76.5	79.6	79.3	83.0	77.7
New Haven/Meriden	156.9	169.4	163.4	160.2	166.7	156.0	168.4	162.9
New Orleans	---	73.1	70.6	70.9	68.4	68.7	72.9	72.2
New York/N.Y./N.J./Ct.	183.5	183.8	183.2	179.8	182.7	186.6	183.6	179.3
Oklahoma City	62.3	56.2	53.5	53.5	52.3	52.3	55.5	53.9
Omaha	59.0	59.5	60.6	59.9	59.3	58.6	63.8	60.2
Orlando	76.2	79.1	79.8	78.1	79.1	78.7	83.2	78.4
Peoria	46.5	45.0	46.8	44.3	42.0	47.7	48.7	47.2
Philadelphia	97.0	102.4	103.9	104.1	96.4	99.9	108.4	110.6
Phoenix	80.9	80.0	78.8	79.6	78.5	82.2	76.8	77.5
Pittsburgh	---	63.2	65.8	62.8	62.4	65.2	68.1	66.9
Portland	64.2	64.4	70.1	64.8	67.1	68.8	71.8	72.9
Providence	121.4	130.6	130.2	133.0	128.8	130.9	132.0	128.4
Raleigh/Durham	98.0	97.0	103.6	97.6	102.0	99.4	105.7	106.4
Riverside/San Bernardino	96.1	106.7	124.1	113.2	116.1	122.2	128.7	128.1
Rochester	72.5	75.7	78.5	76.3	76.4	76.8	80.8	79.2
Sacramento	87.5	95.3	112.6	97.4	100.3	107.2	116.5	120.8
Salt Lake City/Ogden	69.4	67.7	69.4	67.7	67.8	69.9	70.3	68.9
San Antonio	70.2	65.0	64.2	62.1	61.6	63.0	68.2	63.9
San Diego	129.2	147.8	175.2	157.2	163.9	176.6	178.4	178.7
San Francisco Bay Area	171.3	212.6	260.6	232.4	244.0	265.7	269.4	260.6
Seattle/Tacoma	82.6	88.7	115.0	91.9	99.7	109.1	115.9	126.1
Spokane	51.2	51.1	52.4	50.3	50.2	51.8	52.7	53.9
Springfield, Mass.	105.2	118.4	127.1	121.7	124.4	127.0	131.4	124.6
St. Louis	74.3	78.1	76.9	75.7	76.4	75.3	78.3	76.9
Syracuse	68.9	74.6	79.3	75.9	76.9	78.9	80.2	80.1
Tampa/St.Petersburg/ Clearwater	63.8	65.6	71.9	66.2	68.6	71.7	74.0	72.9
Toledo	56.3	58.4	60.8	56.4	57.7	62.4	62.3	60.4
Tulsa	65.7	65.0	62.6	65.3	60.5	62.6	64.4	62.0
Washington, D.C./Md./Va.	114.2	132.5	144.4	130.1	143.7	140.5	148.3	145.6
W.Palm Beach/Boca Raton/ Delray Beach	102.6	99.0	102.6	102.0	94.4	96.2	113.5	114.1
Wichita	---	60.1	62.0	59.6	60.5	61.8	63.7	60.2
Worcester	139.1	147.5	141.5	143.1	146.8	138.7	142.8	138.8

SOURCE: National Association of Realtors

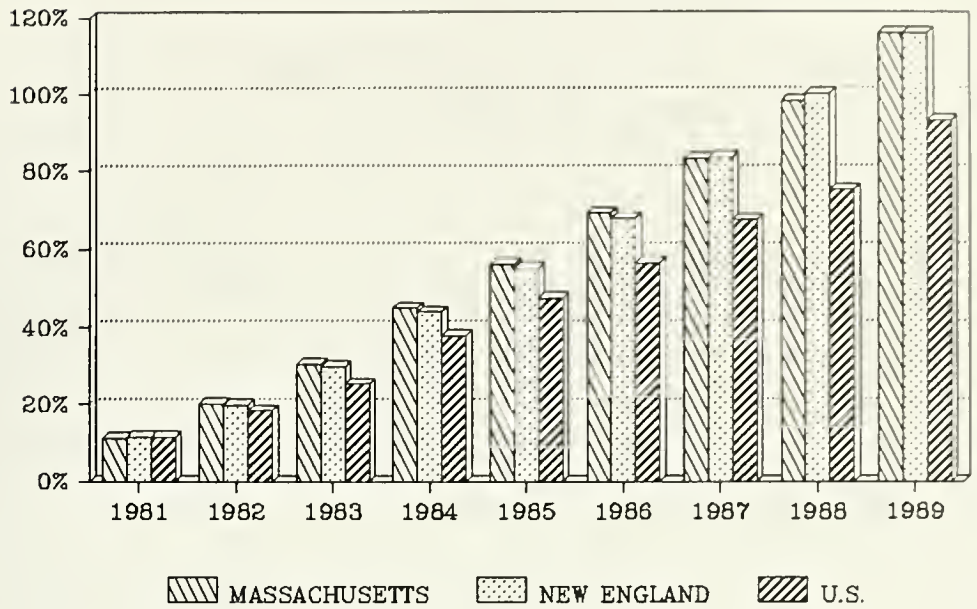
HOUSING AFFORDABILITY INDEX
1989



HOUSING AFFORDABILITY INDEX FOR METROPOLITAN AREAS

	YEARS			QUARTERS				
	1987	1988	1989	1989				1990
Metropolitan Area				I	II	III	IV	I
Baltimore	133.8	129.0	121.9	122.8	113.2	114.0	117.9	113.7
BOSTON	72.6	74.5	71.8	73.2	67.6	71.2	74.7	74.6
Chicago	116.2	110.1	106.0	107.4	98.8	95.1	99.1	92.4
Cleveland	152.7	154.0	147.6	150.5	133.0	136.8	146.7	142.8
Dallas	132.5	143.2	142.1	142.7	136.5	131.8	137.6	142.5
Denver	127.0	143.8	148.5	153.2	143.1	139.5	140.5	146.6
Detroit	166.5	154.3	150.6	151.5	146.6	147.3	154.9	153.5
Houston	182.5	199.8	194.6	197.1	178.0	179.7	210.5	184.7
Indianapolis	176.4	177.3	169.2	169.7	163.7	161.8	167.6	164.8
Kansas City, MO/KS	149.5	157.2	151.7	146.1	147.9	155.8	154.4	149.1
Los Angeles Area	72.9	61.2	53.6	53.2	46.1	45.8	48.0	49.6
Miami/Hialeah	108.8	113.4	108.4	109.9	98.9	101.8	100.2	101.2
Milwaukee	162.1	149.3	144.2	142.6	132.9	134.7	141.4	141.8
Minneapolis/St. Paul	164.1	156.7	152.1	158.9	144.9	148.3	154.5	154.8
New York City Area	50.4	50.6	50.5	51.5	48.6	49.0	51.2	53.8
Philadelphia	110.3	108.9	108.9	105.6	100.2	105.0	104.7	120.5
Phoenix	130.6	134.7	131.9	135.1	125.2	134.3	136.5	130.7
Pittsburgh	n/a	144.6	136.5	137.7	130.5	130.6	133.1	133.4
St. Louis	147.3	150.0	144.1	136.8	146.2	141.6	143.4	141.9
San Diego	83.9	72.2	65.9	65.6	56.7	57.7	58.5	58.2
San Francisco Bay Area	76.8	69.0	58.0	56.0	48.5	48.8	51.1	51.1
Washington	129.2	119.0	114.0	110.8	106.3	107.7	113.5	116.9

CUMULATIVE PERCENT CHANGE IN INCOME
MASSACHUSETTS, NEW ENGLAND, U.S.



	MASS			NEW ENGLAND			U.S.		
YEAR	MILLIONS	% CHG	CUM. %	MILLIONS	% CHG	CUM. %	BILLIONS	% CHG	CUM. %
1980	60,945	----	------	130,375	----	------	2,259	----	------
1981	67,786	11.22%	------	145,282	11.43%	------	2,521	11.62%	------
1982	73,266	8.08%	20.22%	156,305	7.59%	19.89%	2,671	5.95%	18.26%
1983	79,425	8.41%	30.32%	169,145	8.21%	29.74%	2,829	9.90%	25.24%
1984	88,260	11.12%	44.82%	187,447	10.82%	43.78%	3,109	9.90%	37.64%
1985	95,053	7.70%	55.97%	201,986	7.76%	54.93%	3,325	6.97%	47.23%
1986	103,013	8.37%	69.03%	218,573	8.21%	67.65%	3,531	6.19%	56.35%
1987	111,565	8.30%	83.06%	239,271	9.47%	83.53%	3,780	7.05%	67.37%
1988	121,538	8.94%	99.42%	261,741	9.39%	100.76%	4,063	7.50%	79.92%
1989	131,800	8.44%	116.26%	282,200	7.82%	116.45%	4,362	7.35%	93.15%

SOURCE: BUREAU OF ECONOMIC ANALYSIS

1989

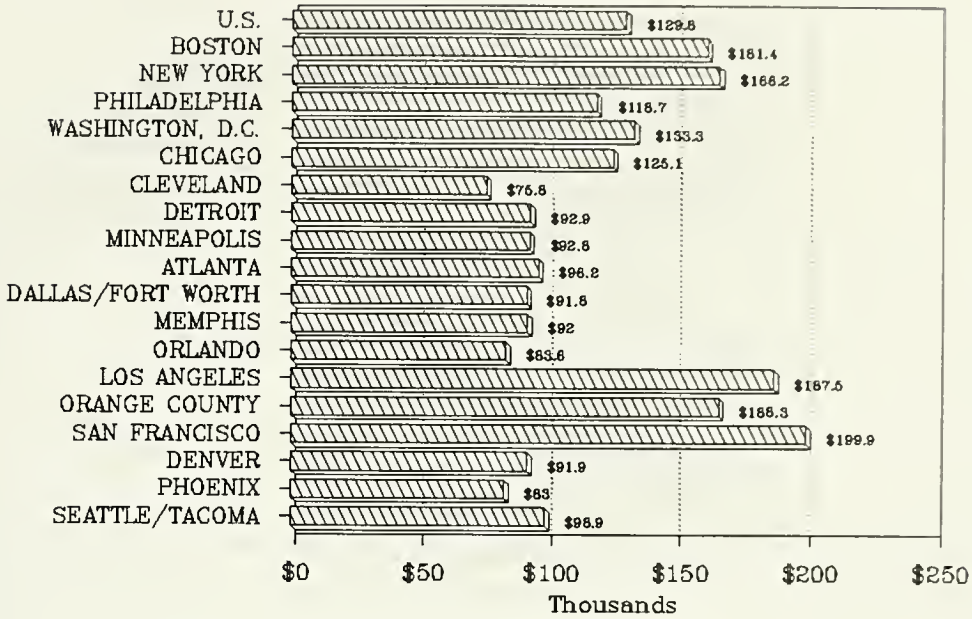
CONVENTIONAL HOME MORTGAGE CLOSING RATES, ALL LENDERS

(EFFECTIVE RATE, PERCENT*)

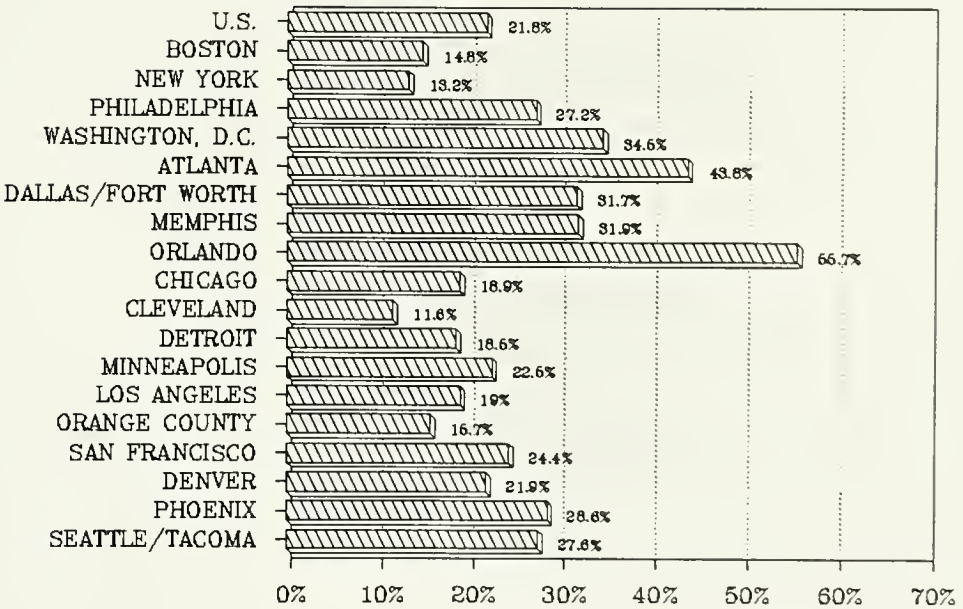
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	ANNUAL AVERAGE
New England, All Loans	9.91	10.41	9.91	10.16	10.43	10.71	10.39	10.21	10.28	10.17	10.26	10.22	10.26
Fixed-Rate Loans Only	10.64	10.87	10.84	11.05	10.43	10.86	10.28	10.32	10.34	10.30	10.35	10.34	10.55
Connecticut, All Loans	9.05	9.15	9.30	9.75	9.67	10.38	9.92	10.06	10.06	9.92	9.84	9.85	9.79
Fixed-Rate Loans Only	10.69	10.07	10.89	10.64	9.67	11.08	10.05	10.32	10.21	10.34	10.22	10.14	10.36
Massachusetts, All Loans	10.16	10.23	10.21	10.68	10.74	10.70	10.46	10.28	10.47	10.12	10.13	10.12	10.36
Fixed-Rate Loans Only	10.66	10.89	10.80	11.25	10.74	10.68	10.25	10.32	10.52	10.21	10.17	10.19	10.56
BOSTON CMSA, Existing Homes	9.66	10.26	10.29	10.54	10.65	10.48	10.38	10.33	10.15	9.97	10.16	10.15	10.25
United States, All Loans	9.61	9.81	9.95	10.09	10.40	10.56	10.41	10.13	10.17	10.16	10.13	10.00	10.12
Fixed-Rate Loans Only	10.60	10.80	10.83	10.93	11.14	11.03	10.66	10.30	10.35	10.37	10.36	10.20	10.63
U.S. Construction/Purchase	9.98	10.20	10.11	10.04	10.30	10.56	10.42	10.16	10.42	10.20	10.32	10.22	10.24
United States, New Homes	9.52	9.82	9.99	10.17	10.18	10.42	10.48	10.22	10.24	10.11	10.09	10.07	10.11
United States, Existing Homes	9.61	9.78	9.93	10.08	10.46	10.59	10.39	10.10	10.13	10.16	10.12	9.96	10.11

*NOTE: Effective Rate includes points charged at closing amortized over 10 years.

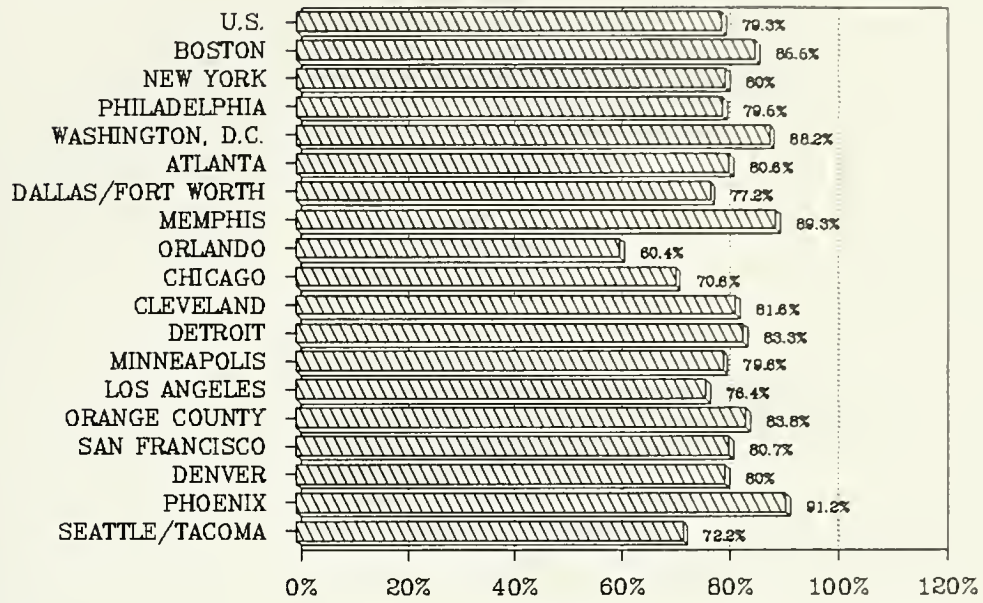
MEDIAN PRICE OF HOMES PURCHASED
1989



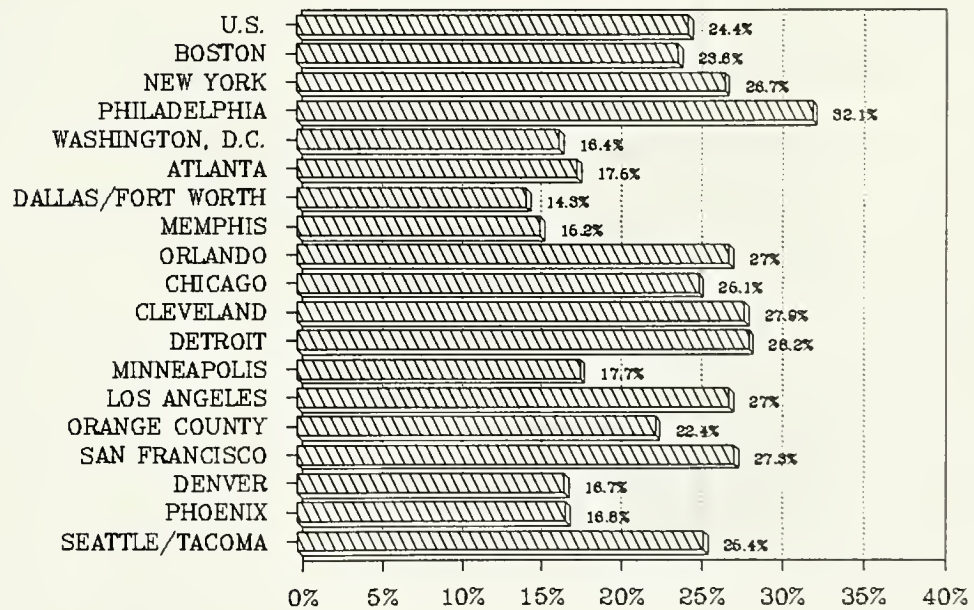
PERCENTAGE OF NEW HOMES (VS. EXISTING)
1989



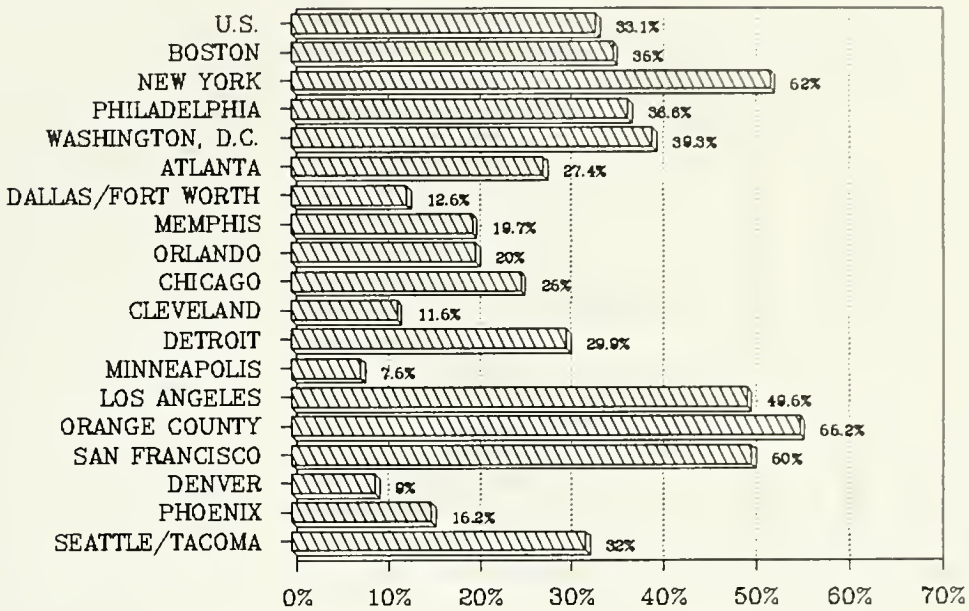
PERCENTAGE OF HOMES BOUGHT BY TWO-INCOME FAMILIES IN 1989



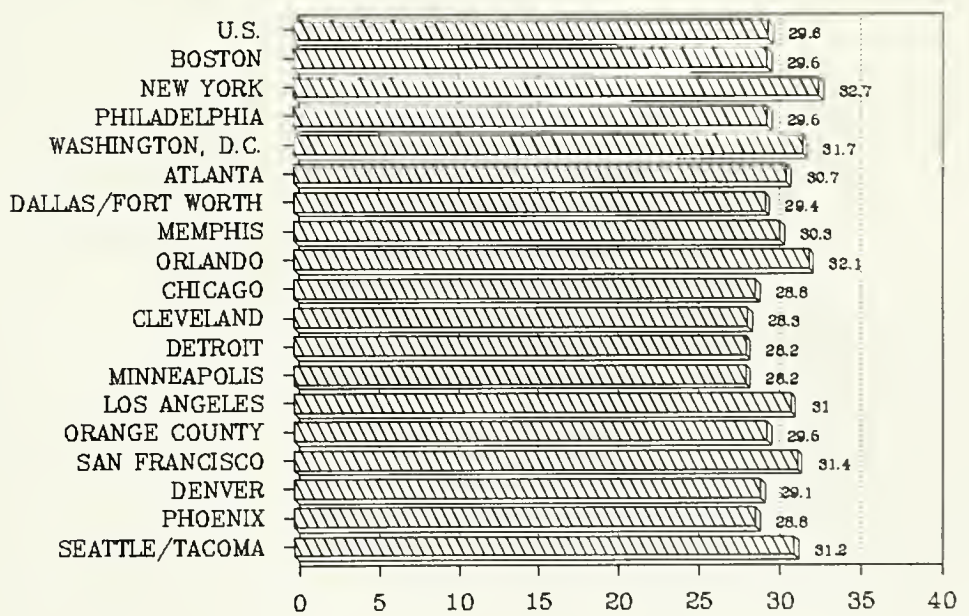
DOWN PAYMENT AS A PERCENT OF SALES PRICE
1989 HOME PURCHASES



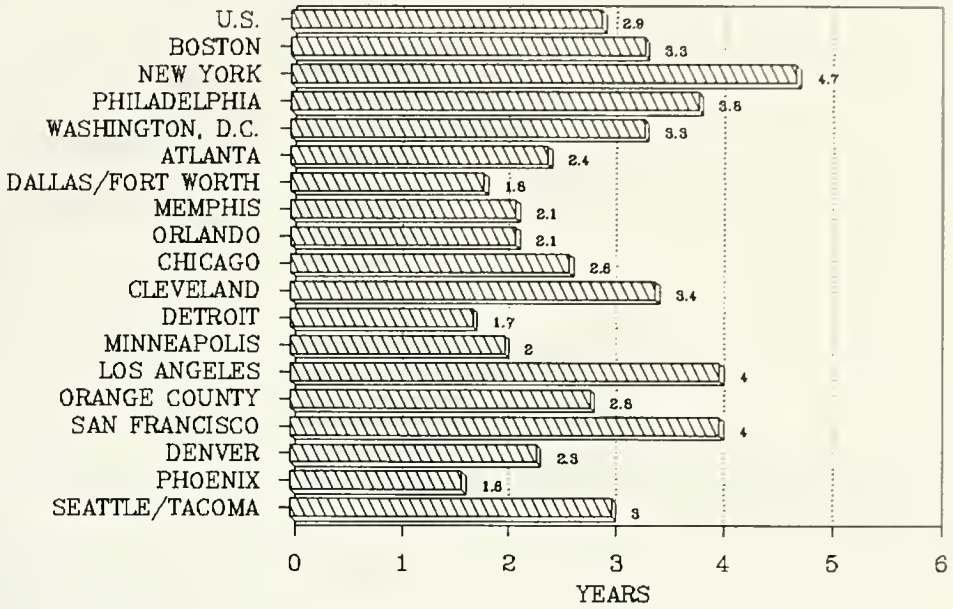
PERCENTAGE OF ADJUSTABLE-RATE MORTGAGES
1989 HOME PURCHASES



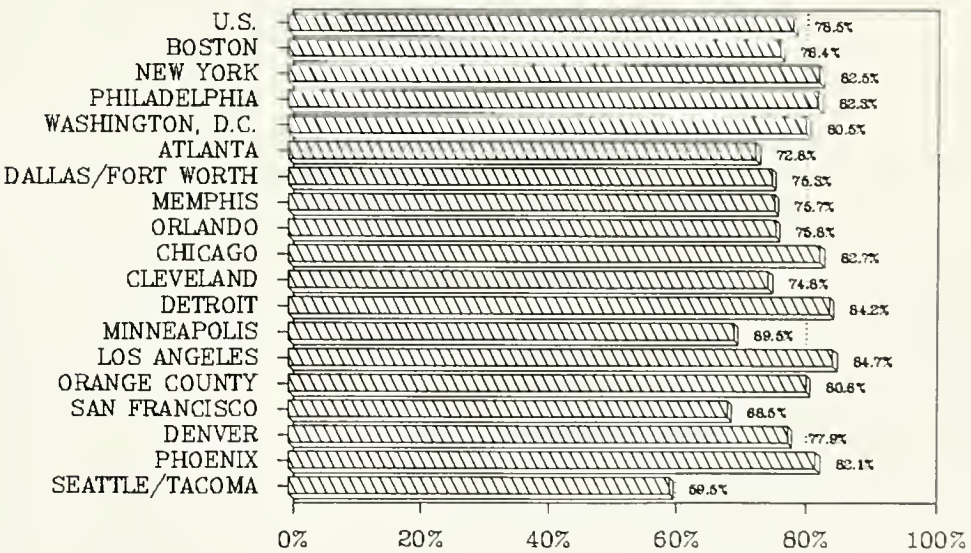
AVERAGE AGE OF FIRST-TIME HOME BUYERS
1989



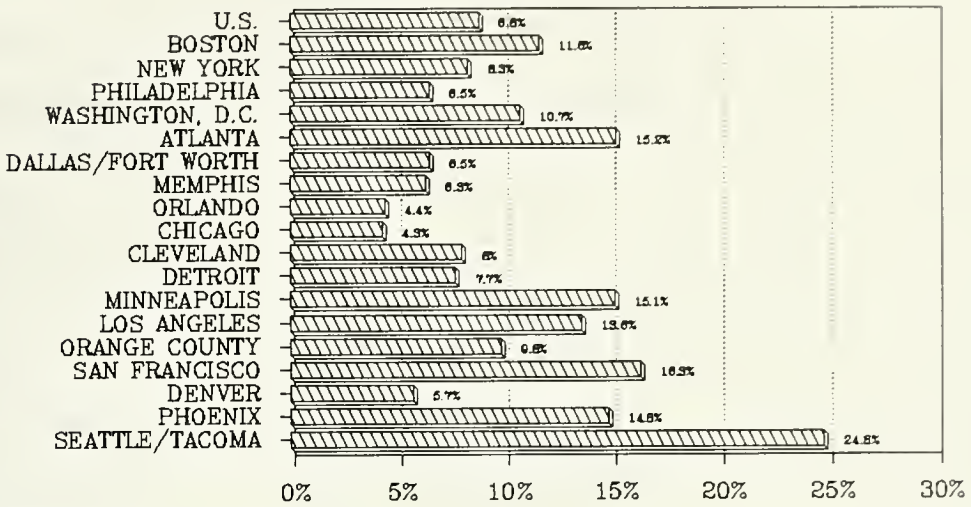
AVERAGE TIME 1989 BUYERS SAVED FOR DOWN PAYMENT



PERCENTAGE OF DOWN PAYMENT BY FIRST-TIME HOME BUYERS COMING FROM OWN SAVINGS AND INVESTMENTS



PERCENTAGE OF DOWN PAYMENT BY FIRST-TIME HOME BUYERS COMING FROM RELATIVES' CONTRIBUTIONS



SOURCE: CHICAGO TITLE & TRUST COMPANY
111 WEST WASHINGTON ST
CHICAGO, IL 60602

NUMBER	NEIGHBORHOOD	RESIDENTIAL ASSESSMENT DISTRICTS	CONDOMINIUM ASSESSMENT DISTRICTS
1	East Boston	0101, 0102, 0103, 0104 0105, 0106, 0107, 0108	21
2	Charlestown	0201, 0202, 0203, 0207	22
3	South Boston	1001, 1002, 1004, 1006, 1008, 1010	23
4	Central	0301, 0501, 2001	6, 7, 8, 13
5	Back Bay-Beacon Hill Bay Village	0401	1, 2, 3, 5
6	South End	0902, 0904, 0905	9, 10
7	Fenway-Kenmore	0601, 0603, 0801	4, 12
8	Allston-Brighton	0701, 0702, 0703, 0705 0707, 0710, 0711, 0712, 0713	17, 18
9	Jamaica Plain	1101, 1102, 1104, 1105 1107, 1109, 1110, 1111, 1112	14, 15
10	Roxbury	0803, 0805, 1201, 1202, 1203, 1204, 1205, 1206	25
11	North Dorchester	1301, 1303, 1306, 1307, 1308, 1601, 1613	24
12	South Dorchester	1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1614, 1901, 1902, 1903	19
13	West Roxbury	1701, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710	16
14	Roslindale	1401, 1402, 1403, 1404, 1405, 1406	20
15	Mattapan	1501, 1502, 1503	20
16	Hyde Park	1801, 1802, 1803, 1804, 1805, 1806, 1808, 1809, 1810	20

City of Boston

Assessing Department

Thaddeus J. Jankowski, Jr., Commissioner

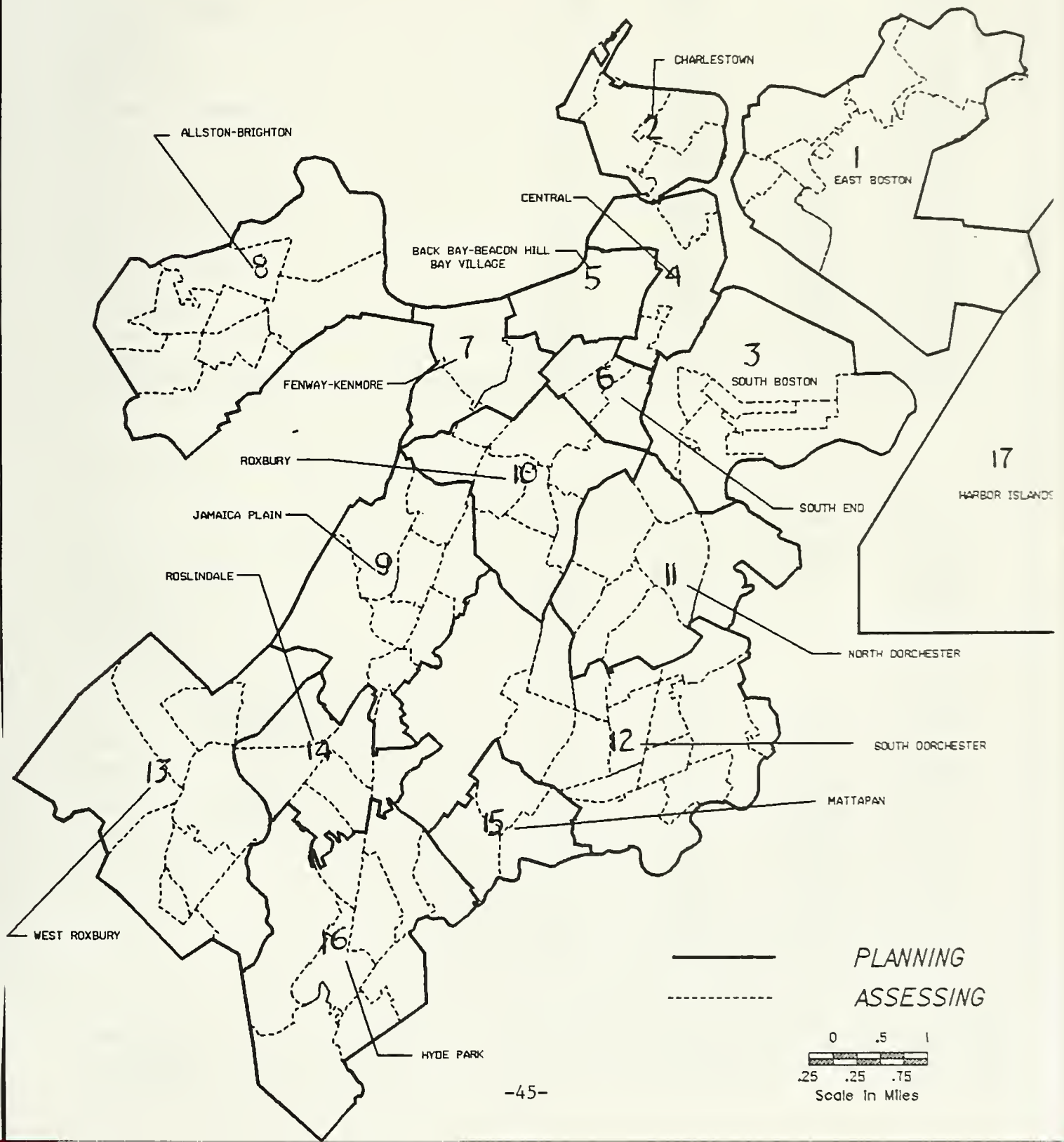
CONDOMINIUM ASSESSING AND BRA PLANNING DISTRICTS

City of Boston

Assessing Department

Thaddeus J. Jankowski, Jr., Commissioner

RESIDENTIAL ASSESSING AND BRA PLANNING DISTRICTS



RESIDENTIAL ASSESSMENT QUALITY STATISTICS

SINGLE FAMILY

B.R.A. AREA	FY91 # Sales	A.P.R.	C.O.D.	P.R.D.
East Boston	25	0.97	15.8%	1.03
Charlestown	19	0.93		1.02
South Boston	30	1.03	12.9%	1.01
Central				
Back Bay	3	1.00		1.00
South End	11	0.94		1.01
Fenway-Kenmore	2	1.29		1.09
Allston-Brighton	38	1.07	8.6%	1.01
Jamaica Plain	76	0.95	9.9%	1.01
Roxbury	12	0.83		1.04
North Dorchester	61	0.93	11.5%	1.01
South Dorchester	114	0.95	10.5%	1.02
West Roxbury	229	0.97	8.1%	1.02
Roslindale	103	0.96	8.8%	1.01
Mattapan	34	0.88	11.7%	1.02
Hyde Park	142	0.95	8.5%	1.01
TOTAL	899	0.96	10.3%	1.01

TWO FAMILY

B.R.A. AREA	FY91 # Sales	A.P.R.	C.O.D.	P.R.D.
East Boston	27	0.97	11.5%	1.02
Charlestown	11	1.04		1.06
South Boston	17	1.09		1.04
Central				
Back Bay				
South End	4	0.88		1.01
Fenway-Kenmore				
Allston-Brighton	54	0.99	10.7%	1.01
Jamaica Plain	56	0.95	10.3%	1.01
Roxbury	18	0.80		1.02
North Dorchester	75	0.89	13.6%	1.02
South Dorchester	112	0.95	11.0%	1.01
West Roxbury	20	0.97	7.0%	1.00
Roslindale	51	0.91	8.2%	1.01
Mattapan	29	0.86	8.7%	1.01
Hyde Park	57	0.94	7.9%	1.01
TOTAL	531	0.94	11.4%	1.01

Because the C.O.D. requires a large sample size to produce reliable results, it is only displayed for those neighborhoods with more than 20 sales.

RESIDENTIAL ASSESSMENT QUALITY STATISTICS

THREE FAMILY

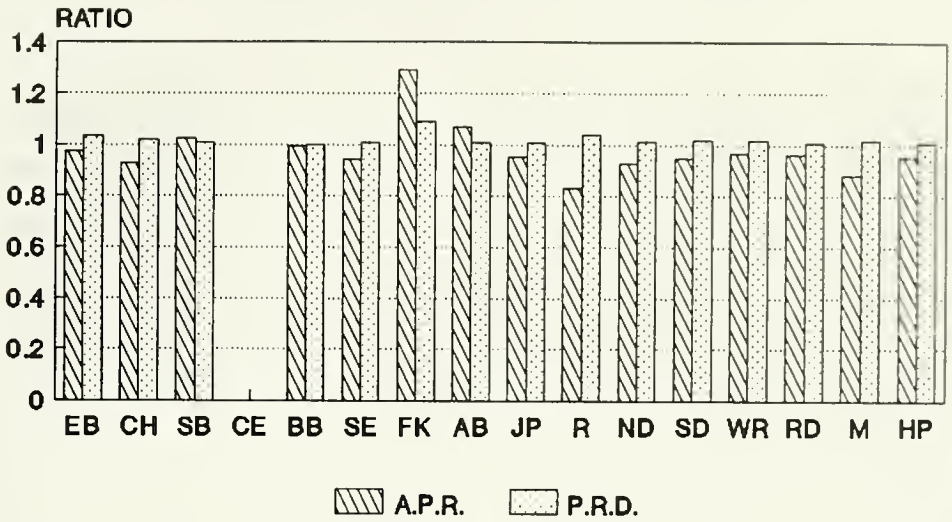
B.R.A. AREA	FY91 # Sales	A.P.R.	C.O.D.	P.R.D.
East Boston	55	1.01	11.4%	1.02
Charlestown	4	1.03		1.01
South Boston	46	0.99	11.7%	1.02
Central	1	1.00		1.00
Back Bay	1	1.18		1.00
South End	3	0.86		1.02
Fenway-Kenmore	1	0.89		1.00
Allston-Brighton	19	0.93		1.03
Jamaica Plain	60	0.94	11.3%	1.01
Roxbury	40	0.91	18.9%	1.03
North Dorchester	184	0.86	12.4%	1.02
South Dorchester	110	0.89	13.1%	1.01
West Roxbury	1	1.15		1.00
Roslindale	22	0.93	12.0%	1.02
Mattapan	23	0.86	10.0%	1.02
Hyde Park	9	0.93		1.02
TOTAL	579	0.91	13.8%	1.02

CONDOMINIUM

B.R.A. AREA	FY91 # Sales	A.P.R.	C.O.D.	P.R.D.
East Boston	84	0.96	11.8%	1.02
Charlestown	98	0.97	11.7%	1.02
South Boston	139	1.03	8.7%	1.01
Central	212	1.00	13.5%	1.01
Back Bay	322	0.99	9.6%	1.02
South End	309	1.00	9.2%	1.01
Fenway-Kenmore	167	1.00	10.0%	1.01
Allston-Brighton	492	1.00	12.9%	1.02
Jamaica Plain	382	1.00	9.6%	1.02
Roxbury	51	1.00	11.4%	1.03
North Dorchester	87	1.00	9.1%	1.01
South Dorchester	108	0.98	12.9%	1.03
West Roxbury	71	1.01	11.8%	1.01
Ros/Matt/Hyde	79	0.98	14.6%	1.02
TOTAL	2601	1.00	11.0%	1.02

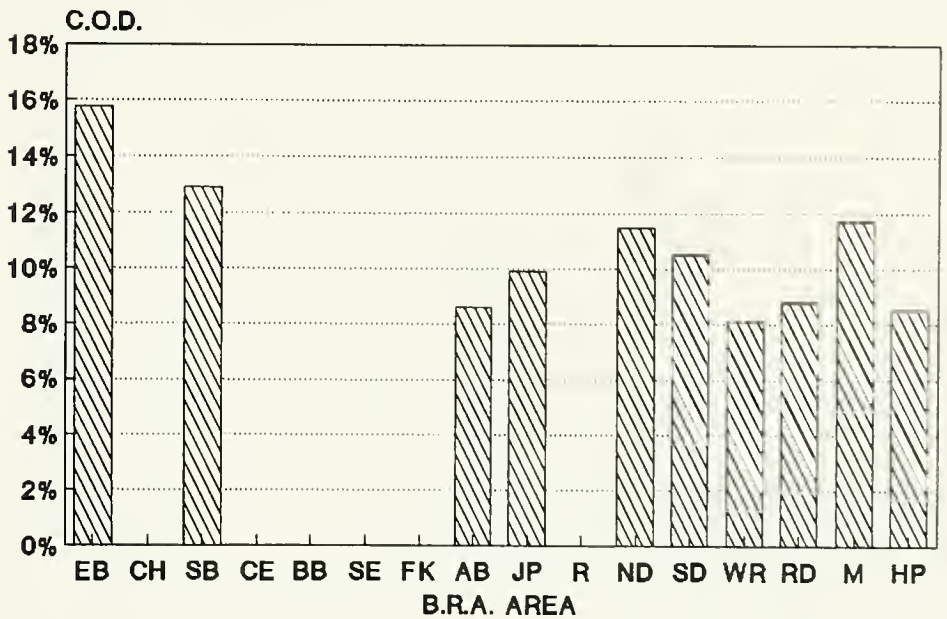
Because the C.O.D. requires a large sample size to produce reliable results, it is only displayed for those neighborhoods with more than 20 sales.

SINGLE FAMILY
ASSESSMENT/PRICE RATIO AND PRICE RELATED DIFFERENTIAL

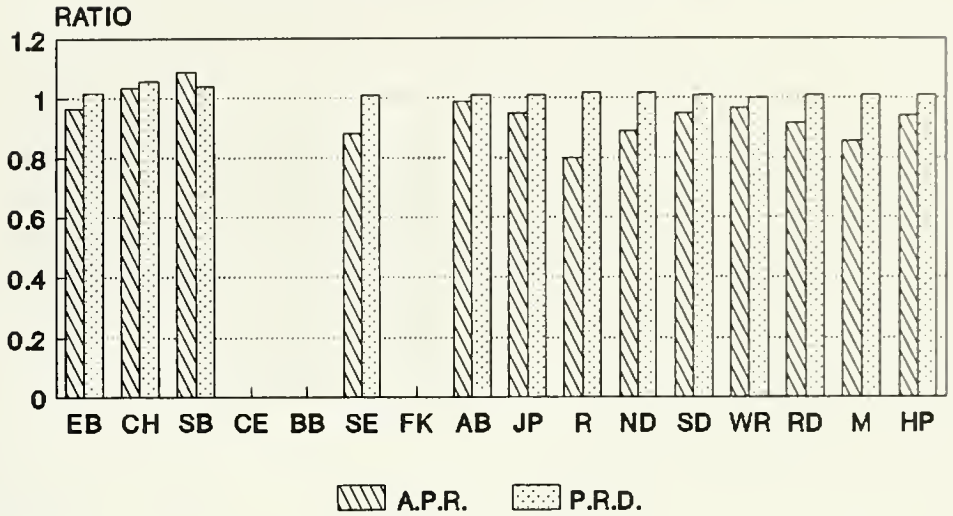


ASSESSMENT/PRICE RATIO =
FY 91 AV / CY 90 PRICE

COEFFICIENT OF DISPERSION

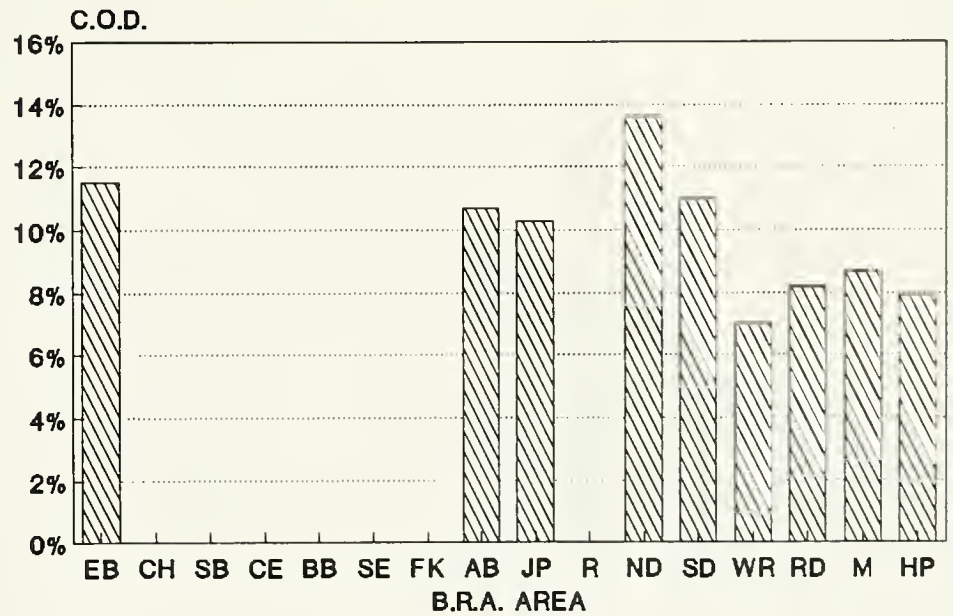


TWO-FAMILY
ASSESSMENT/PRICE RATIO AND PRICE RELATED DIFFERENTIAL

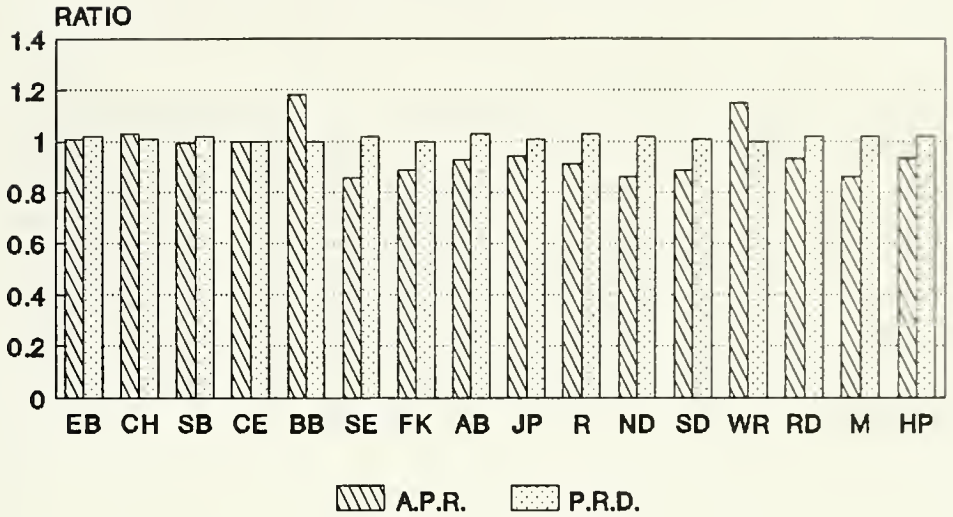


ASSESSMENT/PRICE RATIO =
FY 91 AV / CY 90 PRICE

COEFFICIENT OF DISPERSION

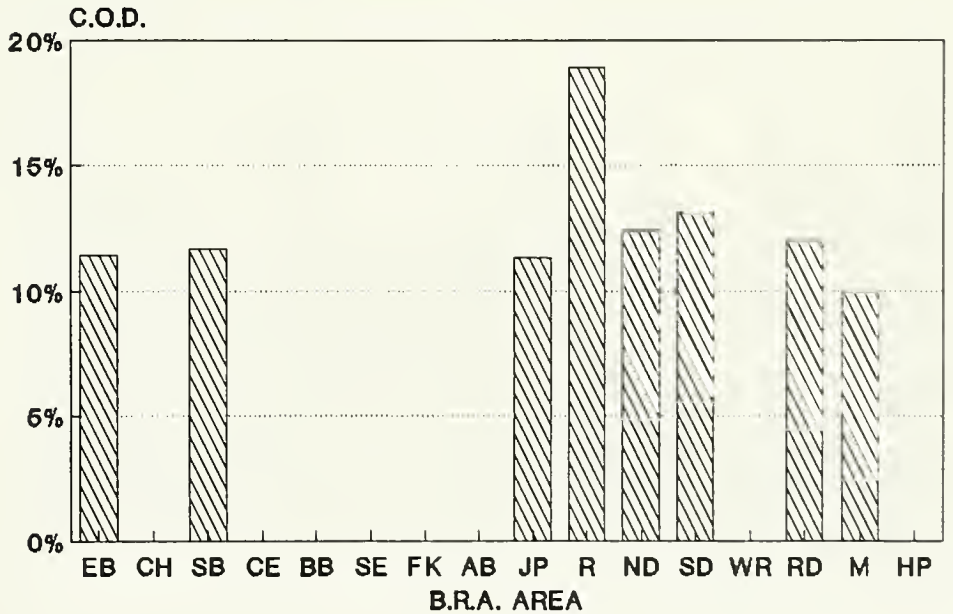


THREE-FAMILY
ASSESSMENT/PRICE RATIO AND PRICE RELATED DIFFERENTIAL

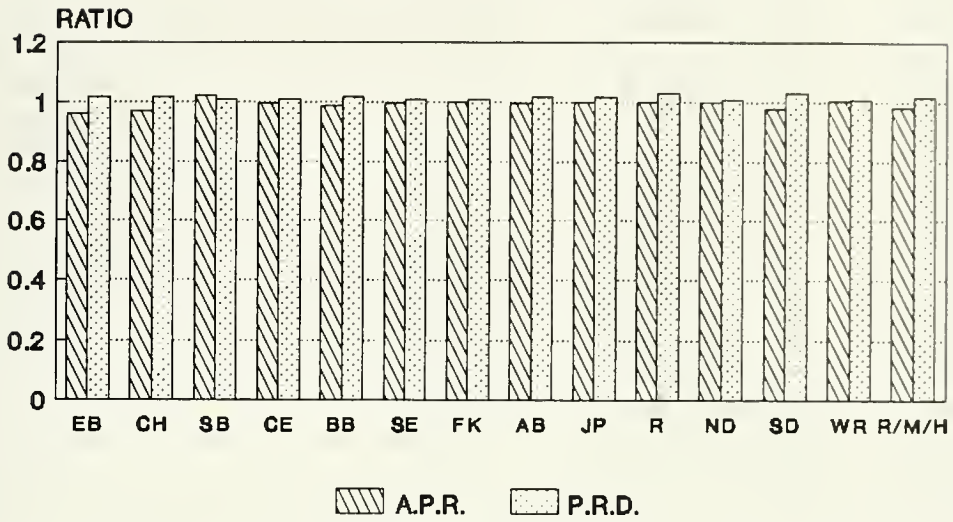


ASSESSMENT/PRICE RATIO =
FY 91 AV / CY 90 PRICE

COEFFICIENT OF DISPERSION

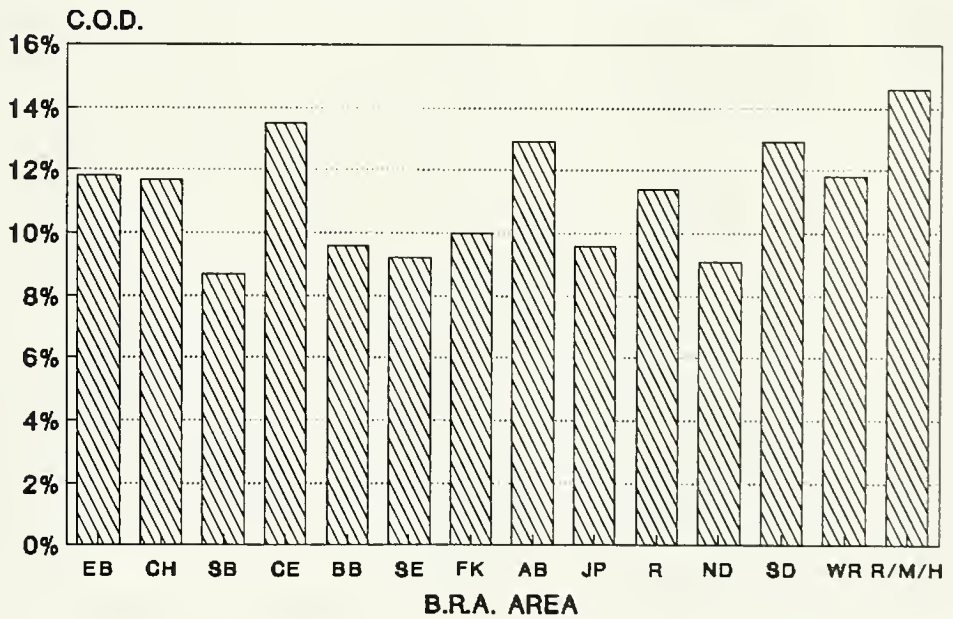


CONDOMINIUM
ASSESSMENT/PRICE RATIO AND PRICE RELATED DIFFERENTIAL



ASSESSMENT/PRICE RATIO =
FY 91 AV / CY 90 PRICE

COEFFICIENT OF DISPERSION



FISCAL YEAR 1991 VALUES
SINGLE-FAMILY

NEIGHBORHOOD	# OF PARCELS	TOTAL VALUE	AVERAGE VALUE
East Boston	1,000	$132,279,500	$132,280
Charlestown	945	$175,457,800	$185,670
Allston-Brighton	1,472	$208,124,000	$141,389
Central	32	$6,438,400	$201,200
Back Bay/Beacon Hill/ Bay Village	416	$305,577,800	$734,562
Fenway-Kenmore	327	$113,892,000	$348,294
South End	40	$17,070,300	$426,758
South Boston	1,641	$307,525,300	$187,401
Jamaica Plain	2,063	$390,100,300	$189,094
Roxbury	822	$90,749,400	$110,401
North Dorchester	1,793	$232,529,700	$129,688
South Dorchester	3,460	$472,749,700	$136,633
West Roxbury	6,388	$1,115,752,300	$174,664
Roslindale	2,854	$416,362,900	$145,887
Mattapan	1,211	$144,023,500	$118,929
Hyde Park	4,710	$643,328,300	$136,588
GRAND TOTAL	29,174	$4,771,961,200	$163,569

FISCAL YEAR 1991 VALUES
TWO-FAMILY

NEIGHBORHOOD	# OF PARCELS	TOTAL VALUE	AVERAGE VALUE
East Boston	1,248	$194,079,300	$155,512
Charlestown	493	$108,137,500	$219,346
Allston-Brighton	1,088	$190,333,000	$174,938
Central	39	$10,238,700	$262,531
Back Bay/Beacon Hill/ Bay Village	128	$88,167,000	$688,805
Fenway-Kenmore	273	$98,806,600	$361,929
South End	11	$3,140,900	$285,536
South Boston	2,603	$609,243,500	$234,054
Jamaica Plain	1,434	$287,949,800	$200,802
Roxbury	894	$112,299,800	$125,615
North Dorchester	1,917	$277,924,800	$144,979
South Dorchester	3,009	$472,489,100	$157,025
West Roxbury	1,025	$217,483,700	$212,179
Roslindale	1,711	$307,265,900	$179,583
Mattapan	1,029	$149,457,200	$145,245
Hyde Park	1,559	$255,022,300	$163,581
GRAND TOTAL	18,461	$3,382,039,100	$183,199

FISCAL YEAR 1991 VALUES
THREE-FAMILY

NEIGHBORHOOD	# OF PARCELS	TOTAL VALUE	AVERAGE VALUE
East Boston	2,147	$341,376,000	$159,001
Charlestown	383	$94,253,100	$246,092
Allston-Brighton	1,637	$308,830,700	$188,657
Central	116	$32,035,000	$276,164
Back Bay/Beacon Hill/ Bay Village	109	$76,344,500	$700,408
Fenway-Kenmore	266	$97,219,700	$365,488
South End	55	$18,968,100	$344,875
South Boston	851	$217,629,500	$255,734
Jamaica Plain	1,419	$279,847,100	$197,214
Roxbury	1,351	$200,083,000	$148,100
North Dorchester	3,418	$533,880,900	$156,197
South Dorchester	2,403	$387,275,600	$161,163
West Roxbury	87	$20,911,300	$240,360
Roslindale	621	$123,723,700	$199,233
Mattapan	475	$72,644,400	$152,936
Hyde Park	320	$59,755,400	$186,736
GRAND TOTAL	15,658	$2,864,778,000	$182,959

FISCAL YEAR 1991 VALUES
CONDOMINIUM

NEIGHBORHOOD	# OF PARCELS	TOTAL VALUE	AVERAGE VALUE
East Boston	661	$74,638,400	$112,917
Charlestown	1,353	$236,072,500	$174,481
Allston-Brighton	1,301	$165,430,700	$127,157
Central	4,353	$989,843,800	$277,393
Back Bay/Beacon Hill/ Bay Village	5,556	$1,340,166,700	$241,211
Fenway-Kenmore	3,474	$583,596,300	$167,990
South End	3,575	$518,126,500	$144,930
South Boston	7,521	$871,512,100	$115,877
Jamaica Plain	2,693	$348,768,700	$129,509
Roxbury	298	$31,614,300	$106,088
North Dorchester	654	$60,633,700	$92,712
South Dorchester	894	$97,320,600	$108,860
West Roxbury	1,527	$199,748,300	$130,811
Ros/Matt/HP	716	$72,017,000	$100,582
GRAND TOTAL	34,576	$5,589,489,600	$161,658

Section III

Commercial Market Review

COMMERCIAL PROPERTY: THE VALUATION PROCESS

Boston's commercial valuation system includes data on all income-producing property, specifically the following:

C: Commercial (retail, office, service, lodging, entertainment, etc.)

I: Industrial (manufacturing, storage, distribution)

A: Apartment (7 or more units)

R4: Apartment (4 - 6 units)

RC: Residential/Commercial (multiple-use)

In the appraisal industry, there are three primary methods of estimating property value: the income, cost, and market approaches. In Boston, each commercial property is valued first by the income and cost methods, while the market approach (i.e., direct sales comparison method) is utilized to support income and cost valuation estimates.

The basic steps for the income and cost approaches are outlined as follows:

Income Approach	Cost Approach
Effective Gross Income	Cost of Improvements
- Operating Expenses	
	+ Site Value
= Net Operating Income	
÷ Capitalization Rate	
= PROPERTY VALUE	= PROPERTY VALUE

Since real estate values constantly change in response to a wide range of factors in the economy and marketplace, the income approach is particularly well-suited for estimating commercial property values. This method measures and utilizes the same market conditions (rental income, operating expenses, interest rates, risk levels, etc.) that affect the decisions of investors who are, in essence, creating the market by their actions.

Net income capitalization produces an indication of value by dividing the net income of a property by a capitalization rate. The capitalization rate is a composite number which incorporates several elements simultaneously. These include a return <u>of</u> the investment equity, and a return <u>on</u> the investment over the life of the investment. Capitalization rates typically vary according to prevailing market conditions, type of property, and the property-specific risk.

<u>Commercial Valuation Standards: Description</u>

Valuation standards are typically defined as the unit values or mathematical equations that are utilized in the

valuation of real property. Distinct standards are developed and applied to both residential and commercial property via the cost, market and income approaches to value. The function of the valuation standards is illustrated in the simple equation:

Property Characteristics	x	Valuation Standards	=	Value

The standards (unit values) are expressed in a variety of forms and terms, and are incorporated into the computerized valuation program. Some of the standards in use are:

- Building cost tables
- Depreciation tables
- Land values (land rates per square foot)
- Economic (market) rents
- Vacancy rates, operating expenses
- Capitalization rates
- Geographic regions (assessment districts)
- Residential models (valuation equations)

The current set of standards was developed as part of the Fiscal Year 1989 citywide revaluation on the basis of a series of market analyses.

Commercial Standards: Income Property

Commercial, industrial and apartment properties are valued primarily by the income approach to value, and

secondarily by the cost approach whose elements are directly extracted from the market. These valuation techniques are conceptually different, with each method utilizing a different valuation formula to compute a property value. Hence, separate standards (units of measure) are developed for each valuation method and then applied in the appropriate formula.

In the valuation process, all properties are also stratified according to their use and location. In this sense, the use and location are also considered to be determinants of value and therefore part of the standards. The valuation standards for income-producing property were developed by a systematic collection and analysis of information on rental rates, operating expenses, sales, and those elements that have an impact on capitalization rates. The significant features of this process and the resulting data are summarized as follows.

(1) Rental rates, income, and expense data were gathered from several sources, including (a) the Assessors' Income/Expense Questionnaire[9], which is sent to all commercial property owners; (b) a number of published real estate journals, both local and national; and (c) on-site data collection by the Assessing Department staff.

(2) The income and expense data that is obtained via current

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[9]More information on these sources may be found in the Appendix.

market sources becomes the foundation of the tables and rates that are included in our computer-assisted mass appraisal (CAMA) system. Collectively these comprise our valuation standards.

(3) The capitalization rates are developed using a standard mortgage-equity formula. This is a widely accepted method of determining a proper capitalization rate. This method makes use of current data on interest rates and investor-equity return, as well as typical loan-to-value ratios and investment holding periods. Also, expected growth rates (market appreciation) and other financial factors are considered.

Cost Approach Standards

The cost approach to value is used to supplement and support the value estimated by the income approach. It is a direct, relatively simple method and is widely accepted in the appraisal of real estate. The cost tables that are incorporated into the valuation system represent the cost of new construction of various building types, and are obtained directly from Marshall and Swift Valuation Service. This national service compiles actual construction costs on an ongoing basis and publishes them for use in the real estate industry.

DESCRIPTION OF COMMERCIAL MARKET TRENDS

Commercial Rent Analysis

Boston rental data correlates with the extremely rapid expansion of the Boston office market between 1986 and early 1988. With unusually high levels of new construction and leasing activity during that period, asking rents increased at a steady pace until supply and demand pressures became more balanced and led to the inevitable market stabilization.

The firming of Boston's office market rents in 1989 indicates a market that has actually been relatively healthy, despite the press and despite negative sentiment among some in the industry. This certainly bodes well for both the near term and intermediate term.

As a gauge of commercial market activity, the Assessing Department performed an analysis of commercial rent levels for 1988 and 1989. Two quarterly reports, Spaulding & Slye's The Spaulding & Slye Report and Leggat McCall/Grubb & Ellis' Availability Analysis of Downtown/Back Bay Office Buildings, are particularly suited to this type of analysis. Part of each quarterly report lists statistics for Class A office properties in the Downtown and Back Bay regions, along with estimated asking rents for these properties. Exhibit 13 provides related summary statistics for the years 1987 to 1990.

Office Rental Rates

In downtown Boston[10], the average asking rate for office space as of January 1990 was $27.83 per square foot, or 3.46% less than the 1989 rate of $28.83 per square foot. Part of this softening of office rents is the return in 1989 of many rehabbed properties. As of January 1990, 25 percent, or nearly 2 million square feet, of office space in these rehabs was vacant.

In the Back Bay, Spaulding & Slye shows that asking rents for two new buildings at 500 Boylston Street and 116 Huntington Avenue were close to $40.00 per square foot. Asking rents for space in these two buildings contributed significantly to the 6.28% increase in the average Back Bay asking office rent, which rose to $28.94 per square foot following a flat 1989 figure of $27.23 per square foot.

Combining the Downtown and Back Bay, average asking rents as of January 1990 were down $0.50 per square foot, or 1.75%, back to their January 1988 levels of $28.04 per square foot. With some new construction coming on line in 1990, it is not surprising that in a somewhat lackluster office market, office rents should remain soft.

Change in Asking Rates

The accompanying Spaulding & Slye data shows that the predominant trend in asking rents for Downtown and Back Bay office properties reveals little or no change from year to

[10]Certain Class A office space in Charlestown and the North Station area is included in the Downtown statistics.

year in each of the three periods covered by the Spaulding & Slye data. The histograms in Exhibit 13 illustrate only a small number of properties with increasing or decreasing rents. The central tendency is that of a very flat market.

Commercial Expense Analysis

As mentioned earlier, a property's value is calculated by dividing the net income by a capitalization rate. The net income is derived by subtracting the expenses of the property from the gross income that is generated. Therefore, it is also important to monitor the general expense levels for each property type. By doing so, any variation from the expected norm of a property's operating expenses can be observed and taken into account.

Expenses are usually separated into two general categories for the purpose of appraisal: operating expenses and fixed expenses. Operating expenses include all normal costs to run the property, with the exception of capital expenditures and mortgage payments. Fixed expenses, which largely fall outside the realm of property management, typically include real estate taxes and building insurance.

Although the expense of owning and operating a parcel of real estate can vary greatly from property to property, it is possible to develop standard expense ratios when many similar properties are compared and analyzed in the aggregate. Expense data is collected from the same sources as income data: property owner questionnaires, abatement applications,

and published sources. Once collected, the actual expense data is used to develop the expense standards within the department's CAMA system. This data is then utilized as part of the income valuation equation.

Expenses have historically kept pace with property income levels. In Boston, recent data suggests that both income and expenses have remained virtually static during the last two years. Although total operating expenses gradually increased at an average annual pace of 6.7% since 1983, they decreased from 1988 to 1989, as portrayed in Exhibit 14. Also, total operating expenses of Boston office buildings have consistently remained within a range of 27-30% of total income. This compares favorably with other large cities, as illustrated in Exhibit 15.

Overall, expenses in Boston have remained relatively constant over the past several years when compared to rent levels. This trend is also apparent nationally, as demonstrated in Exhibit 16. If both income and expenses remain relatively constant from one year to the next, and other factors such as mortgage rates remain stable, property values should remain constant.

Capitalization Rates

The income approach to property valuation incorporates rental income, expenses, interest rates, risk levels and other factors to arrive at a fair estimate of property value. The interest rate component figures into the equation not only with respect to prevailing mortgage rates, but also as part of the capitalization rate.

Capitalization rates generally follow the pattern established by mortgage interest rates, as shown in Exhibit 17. After reaching a 1984 high of 11.2%, capitalization rates for multi-family and nonresidential mortgages fell steadily through 1985 and continued to fall, although at a slower rate, through 1986 when they hit a low for the year of 9.1% . This drop in rates over the two-year period coincides with the high level of commercial real estate activity in Boston.

Capitalization rates in 1987 showed only slight increases, ending the year at 9.4% . Although a sharp drop to 9.0% occurred in the first quarter of 1988, capitalization rates climbed slowly back up to around 9.3%, remaining there into 1989. This rise seemed to portend a period of retrenchment for the commercial real estate market. Capitalization rates dipped slightly in the first half of 1989, remaining at or above 9.0% . A sharper drop occurred in the second half of the year, keeping rates in the 8.6-8.8% range for the balance of the year.

Still, 1989 marked the second year in which the commercial market was forced to take a breather from the

overheated market conditions of the mid-'80s. The decline in both interest and capitalization rates in 1989 played an important part in reinforcing the stable market conditions and the Department's subsequent market indexing decisions.

Interest Rates

Capitalization and mortgage rates both depend to a large degree on movements in interest rates generally. The slow, steady drop in interest rates that began in 1986 accelerated in early 1987. During this two-year span the commercial real estate markets certainly benefitted from relatively low rates. Conversely, the subsequent rise in rates beginning in 1988 and continuing through 1989 contributed significantly to the change in the real estate investment climate.

1988 witnessed a long, steady rise in most interest rates. Practically all rates ended 1988 at or near their yearly highs, with corporate AAA bonds the lone exception. These bonds, along with FHA-insured mortgage rates, fluctuated in a one-point range all year. Exhibit 18 shows selected rates for January 1988 through June 1990.

1989 started off with most rates continuing their 1988 upward momentum. March 1989 marked the year's high for all rates except the Federal Reserve Bank's discount rate. This reached 7.00% in March and did not change. Also in March the prime lending rate reached 11.50%, its highest level since late 1984. The prime remained unchanged until June, when it fell off to 11.07%, ending 1989 where it started, at 10.50% .

From April through December, most rates ratcheted their way downward, with just a single blip for most rates in September or October. The FHA-insured mortgage rate finished the year at 9.72% - more than 1 full point below its December 1988 level - while the Federal Funds rate ended 1989 at 8.45%, only 31 basis points below its level twelve months earlier.

Miscellaneous Commercial Market Trends

Vacancy Rates[11] - The topic of vacancy rates has found its way into its share of newspaper articles in recent years. In Boston, much of the vacancy rate news seems to contain a sharply negative slant. Much of this can be traced to the sharp decline in the stock market in late 1987, when Boston's larger financial services firms suspended their growth after expanding throughout 1987. However, such a respite is inevitable subsequent to a run-up in real estate values and activity. Furthermore, Boston's office vacancy rates have been consistently well below the national average and well below those of most major U. S. office markets as well.

Subleasing activity rose in 1988 and had a significant impact on the office market. Financial and investment firms that were overcommitted ultimately sublet much of their space - so much, in fact, that the sublease market represented 25%

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[11]Downtown Boston is defined as the area bordered by State Street, Tremont Street, Summer Street and the waterfront. Back Bay is defined as the area bordered by Massachusetts Avenue, Columbus Avenue, Charles Street and the Charles River. All figures are in terms of net rentable area (NRA). An average rate is a typical rate, not necessarily a mathematical average.

of the city's total available space. The amount of sublet space remained fairly high through 1989, and was as much as 500,000 square feet in early 1990.

In 1989 Boston experienced a levelling off of vacancy rates following a sharp rise in 1988. While it is certainly true that estimates of vacancy rates can and do vary from source to source, reports from three major sources (see Exhibit 19) reveal that quarterly rates fluctuated between 11.0% and 12.0% throughout the year. There was further consensus that vacancy rates jumped in the fourth quarter of 1989 and that they have risen slightly going into 1990.

Two local office regions of primary interest are Boston's Financial District and the Back Bay. Since the Financial District includes much more total office space than the Back Bay, vacancy rates for the Financial District often parallel those of the two districts combined. In 1989, quarterly vacancy rates in the Financial District ranged from 12.7% in the first quarter to 11.8% in the third quarter. Typically these rates were from 0.5% to 1% above the combined rates.

Depending on the reporting source, estimated rates for the Back Bay tend to vary more widely than those for the Financial District. Two of the more reliable sources listed 1989 Back Bay rates in the 7-8% range for the bulk of the year, with a fourth-quarter spike to around 9.5-10% .

Compared with early 1988 and prior periods, the vacancy rate picture may appear somewhat bleak. Indeed, Cushman & Wakefield reports that 4 million square feet worth of tenants

left downtown Boston between Spring 1987 and Spring 1990. Still, the outlook is improving; the Boston Redevelopment Authority indicates that vacancy rates in Boston have peaked, and it projects a drop to lower levels. In addition, Exhibit 20 demonstrates that Boston's 12.6% office vacancy rate stands out as one of the nation's lowest vacancy rates, well below the national average of 16.7%.

Absorption Rates - As do estimates of vacancy rates, estimates of absorption rates vary widely. The Boston Redevelopment Authority estimated 1989 office space absorption for all of Boston at approximately 850,000 square feet, effectively the same as in 1988. The Building Owners and Managers Association (BOMA) estimated Boston's absorption at about 350,000 square feet. This rate is quite low compared with BOMA's estimated annual average of 1,700,000 square feet for the years 1984 through 1988.

Although the BRA numbers showed the Back Bay with slightly negative absorption in three of four quarters in 1989, overall figures were positive. In fact, one report on office markets worldwide places Boston sixth nationwide in net absorption (Central Business District and outlying areas combined) for all of 1989 and fourth in the second half of the year.

New Construction and Total Office Inventory - The sudden increase in vacancy rates in Boston, a result of demand as reflected in the declining absorption rates, is offset by the decline in new construction activity. While 1988 witnessed

the addition of just over 3 million square feet of office space, only two office buildings totaling about 638,000 square feet were completed in 1989. The completion of 745 Atlantic Avenue (158,000 square feet) and 125 Summer Street (480,000 square feet) brought total office inventory in Boston to approximately 41.7 million square feet. Exhibits 21 and 22 show new office construction in downtown Boston and total office inventory citywide over several years.

FISCAL YEAR 1991 COMMERCIAL ASSESSMENTS

The ultimate measure of property assessments is naturally the "market" itself, i.e. current sale prices paid for actual properties. A one-to-one comparison of a sale price to an assessment yields a ratio, and the aggregate sale ratios can be used as an indicator of the accuracy of current assessments in general. This type of value-testing is an essential part of the ongoing valuation analysis conducted by this department.

Sale Ratios: Assessment Performance Indicators

The sale ratio approach to determining the validity of the assessed values for commercial property is essentially the same as used for residential property. Each sale is compared to its Fiscal Year 1991 assessment (as of January 1, 1990), which yields the assessment-to-sale ratio. Once the ratios are grouped according to property type and location, the mean and/or the median ratio is calculated. The median is the

preferred statistic since it is less affected by extreme values than a simple average.

Since there are many fewer commercial sales than residential sales, particularly for the individual property types, a much broader stratification is used here. There are presently 57 different commercial valuation districts, which are split into two geographic regions: Downtown/Back Bay, and the remaining outlying areas of the City.

Stratification by property type is also necessary in order to capture meaningful trends from the assessment-to-sale ratios within each group. Therefore, the commercial sales are separated into seven property types:

(1) Apartment (A)
(2) Apartment:4-6 units (R4)
(3) Resident./Commercial (RC)
(4) Commercial (C)
(5) Commercial Condo (CC)
(6) Commercial Land (CL)
(7) Industrial (I)

Exhibit 23 displays the sale ratios for those sales that occurred during 1987-1989[12]. The analysis upholds the validity of the Fiscal Year 1991 assessments, as the ratios indicate assessment levels at, or slightly below, current market levels. In addition, an analysis of sale ratios for each geographic commercial region demonstrates that

[12]Sales from the previous three years were used to ensure an adequate number of sales for analysis purposes.

assessments reflect market values and are uniform across the City.

Analysis of Commercial Rent Standards

Commercial rent tables are essential components of the CAMA system used in the calculation of assessed values. In order to verify that these tables provide reasonable indications of rent levels as reflected by the current market, they are compared with office market surveys conducted by commercial real estate investment/brokerage firms. Again the Department incorporated data from Spaulding & Slye and Leggat McCall/Grubb & Ellis, Inc. in its analysis. The surveys conducted by these firms include estimated rents for major office properties in the Downtown and Back Bay areas of Boston. (For the sake of thoroughness, two similar sets of data were measured.)

Exhibit 24 depicts the ratios of the system rents (i.e., the Department's computer-generated rents calculated from the commercial rent tables) to the Spaulding & Slye rents, the Leggat McCall rents, and the combined Spaulding/Leggat rents, respectively. The commercial rent tables accurately measure a great majority of office properties[13]. Further, it can be noted that any variance between the commercial rent tables and the market surveys is slight.

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[13]As mentioned, Spaulding & Slye and Leggat McCall data consists of estimated asking rents. Because actual rents are slightly below asking rents, the medians are close to market (1.00).

Income/Expense Analysis

As part of the process of collecting accurate real estate market data, the Assessing Department's Research & Standards Unit distributes an Income/Expense Questionnaire (see Appendix) to owners and managers of commercial property. From the completed questionnaires, data on gross and net rental income, vacancies, and the like are obtained, classified and analyzed. Among typical classifications are such items as occupancy type, number of rentable square feet, location and so forth.

The summary statistics displayed in Exhibit 25 show the median ratios of system rents (as described previously) to rents reported on the Income/Expense Questionnaires. A look at this data provides additional evidence that on the whole, the rent tables accurately reflect current market conditions.

Exhibit 13

SUMMARY OF DOWNTOWN BOSTON AND BACK BAY
OFFICE SPACE RENTAL

RATES

	1987	1988	1989	1990
DOWNTOWN BOSTON				
NO. OF BUILDINGS W/ RENT DATA	102	113	120	143
AVERAGE RENT PER SQ FT	$26.99	$28.22	$28.83	$27.83
BACK BAY				
NO. OF BUILDINGS W/ RENT DATA	24	27	26	34
AVERAGE RENT PER SQ FT	$26.68	$27.27	$27.23	$28.94
OVERALL				
NO. OF BUILDINGS W/ RENT DATA	126	140	146	177
AVERAGE RENT PER SQ FT	$26.93	$28.04	$28.54	$28.04

PERCENT CHANGE:

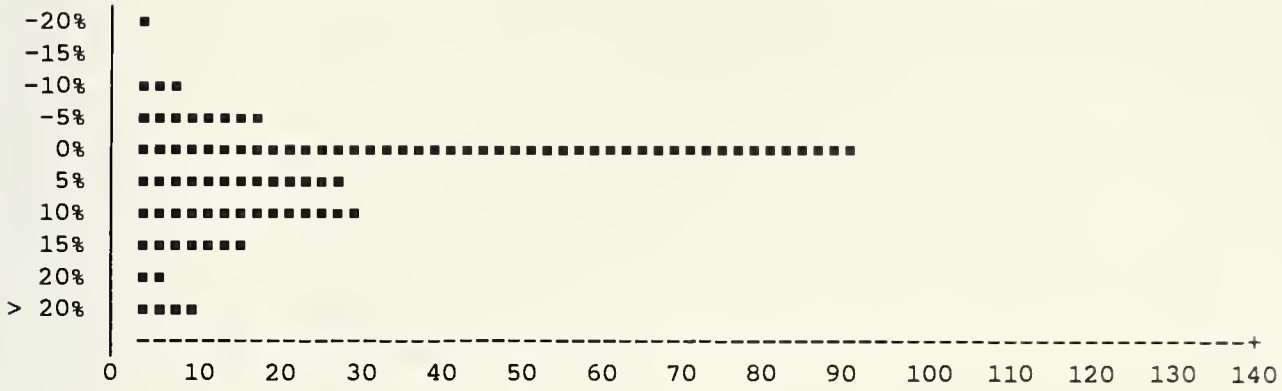
	88/87	89/88	90/89
DOWNTOWN BOSTON			
NO. OF BUILDINGS W/ DATA*	94	106	120
AVERAGE PERCENT CHANGE	1.39%	1.69%	-0.88%
NO. OF BUILDINGS WITH:			
NO PERCENT CHANGE**	63	81	73
PERCENT CHANGE < -5	11	8	25
PERCENT CHANGE > 5	20	17	22
BACK BAY			
NO. OF BUILDINGS W/ DATA*	21	25	26
AVERAGE PERCENT CHANGE	2.61%	0.82%	1.65%
NO. OF BUILDINGS WITH:			
NO PERCENT CHANGE**	12	19	17
PERCENT CHANGE < -5	2	2	5
PERCENT CHANGE > 5	7	4	4
OVERALL			
NO. OF BUILDINGS W/ DATA*	115	131	146
AVERAGE PERCENT CHANGE	1.61%	1.52%	-0.43%
NO. OF BUILDINGS WITH:			
NO PERCENT CHANGE**	75	100	90
PERCENT CHANGE < -5	13	10	30
PERCENT CHANGE > 5	27	21	26

* Calculation Requires Data For Each Of 2 Years

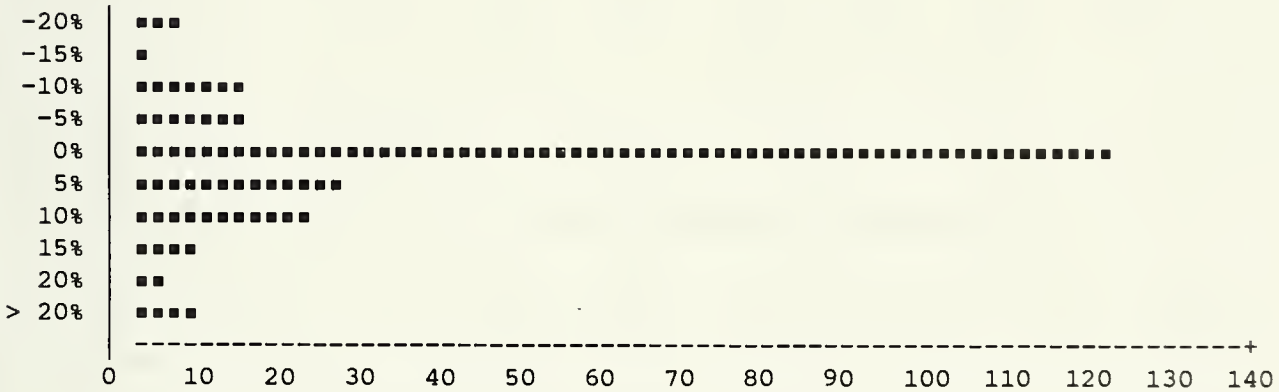
** No Change, +/- 5 Percent

Source: The Spaulding & Slye Report

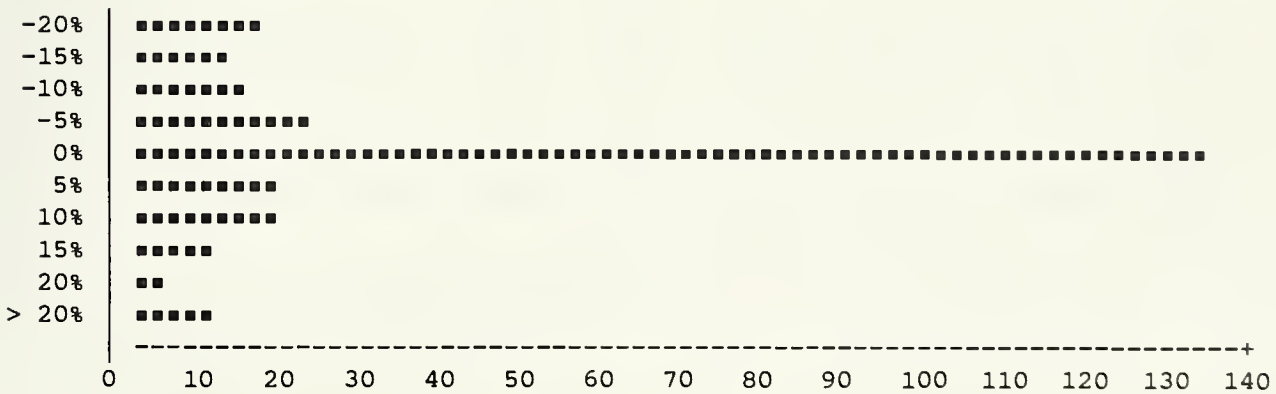
OFFICE RENTAL RATES - PERCENT CHANGES
DOWNTOWN AND BACK BAY 1987 TO 1988



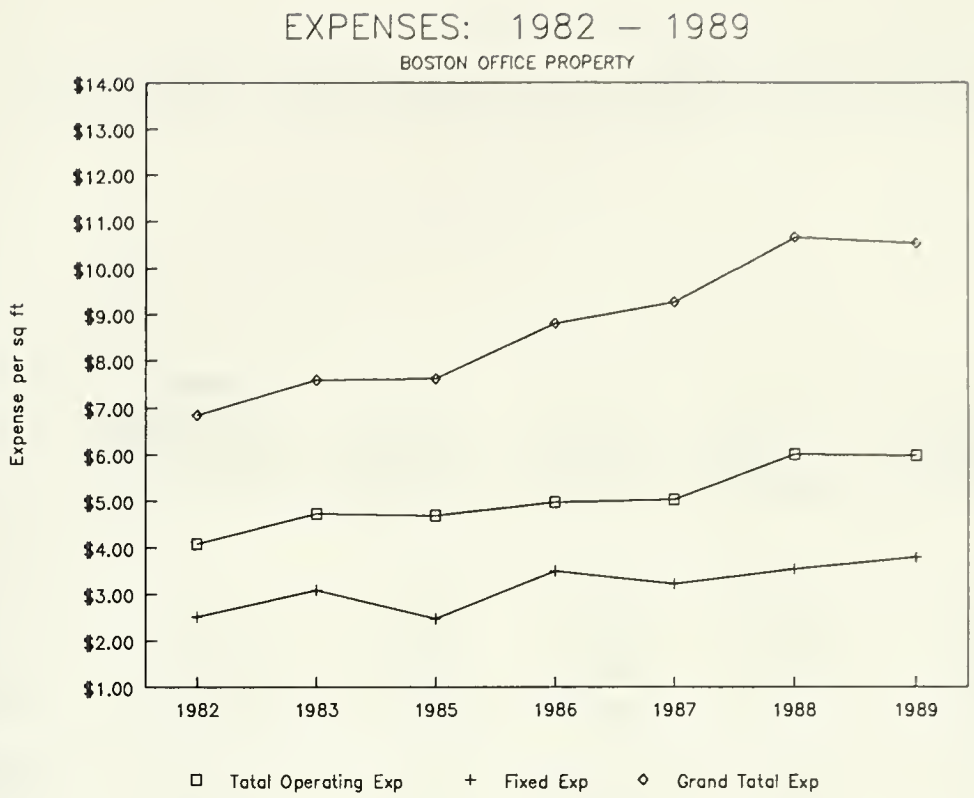
OFFICE RENTAL RATES - PERCENT CHANGES
DOWNTOWN AND BACK BAY 1988 TO 1989



OFFICE RENTAL RATES - PERCENT CHANGES
DOWNTOWN AND BACK BAY 1989 TO 1990



Sources: Spaulding & Slye, Leggat McCall



MEDIAN EXPENSE DOLLARS (per Sq. Ft.)

		1982	1983	1985	1986	1987	1988	1989
EXPENSE								
	CLEANING	$0.70	$0.95	$0.97	$0.96	$1.08	$1.19	$1.26
	REPAIR-MAINT	0.88	1.08	1.06	1.24	1.13	1.37	1.17
	UTILITIES	1.50	1.27	1.49	1.14	1.34	1.70	1.67
	*RDS/GNDS/SEC	0.30	0.32	0.34	0.37	0.41	0.42	0.39
	ADMINISTRATIVE	0.50	0.65	0.88	0.94	0.77	1.01	0.98
TOTAL	OPERATING EXP	4.07	4.72	4.69	4.97	5.03	5.99	5.97
	FIXED EXP	2.51	3.08	2.47	3.49	3.22	3.54	3.78
TOTAL	OPER+ FIXED	6.70	7.45	7.28	8.54	8.53	9.94	10.05
	LEASING EXP	0.14	0.12	0.32	0.25	0.71	0.70	0.47
	GRAND TOTAL	6.84	7.57	7.60	8.79	9.24	10.64	10.52

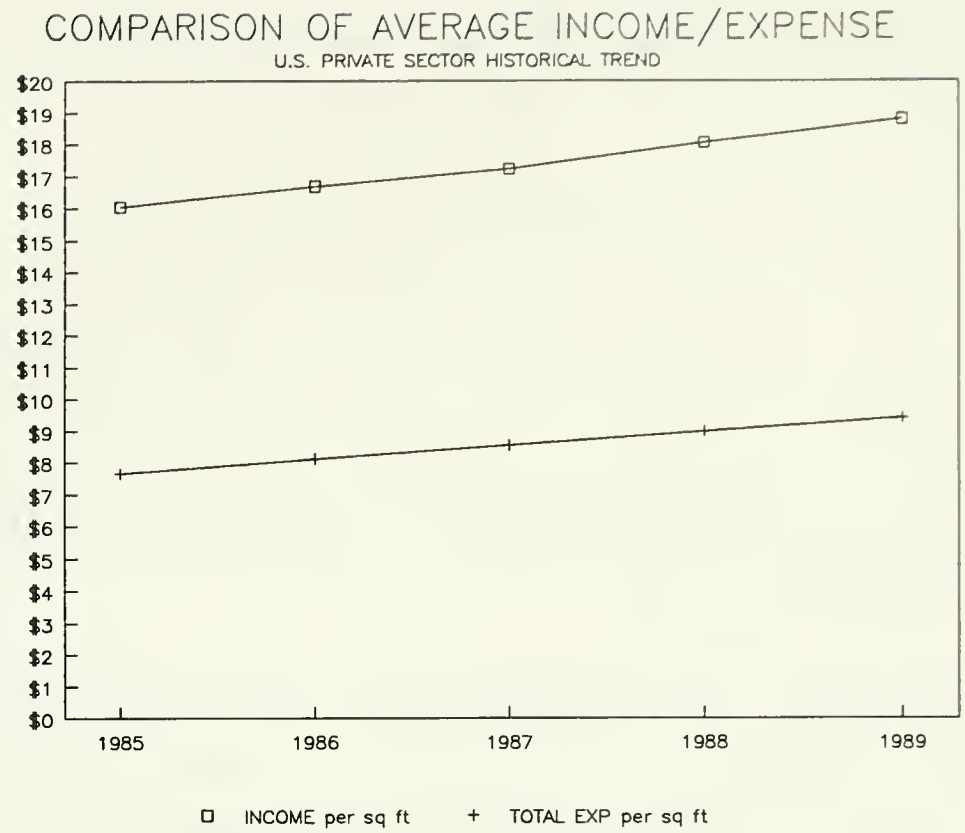
* ROADS, GROUNDS, SECURITY

SOURCE: BOMA Experience Exchange

CITYWIDE COMPARISON: INCOME/EXPENSE RATIOS

	1989 DOWNTOWN TOTAL INCOME RENT /S.F.	MEDIAN OPERATING EXPENSE/SF	MEDIAN OPER EXP % RATIO	MEDIAN OPER+FIXED EXPENSE /SF	OPER+FIXED EXPENSE % RATIO
ATLANTA	$12.10	$4.55	37.6%	$6.14	50.7%
BOSTON	21.75	5.97	27.4%	10.05	46.2%
CHICAGO	18.13	5.98	33.0%	11.16	61.6%
HARTFORD	19.29	6.61	34.3%	9.65	50.0%
LOS ANGELES	20.57	5.91	28.7%	8.17	39.7%
MIAMI	19.09	5.41	28.3%	9.64	50.5%
NEW YORK	32.68	8.14	24.9%	16.30	49.9%
PHILADELPHIA	19.09	6.03	31.6%	8.75	45.8%
PITTSBURGH	16.00	5.20	32.5%	8.05	50.3%
SAN FRANCISCO	19.34	6.43	33.2%	8.51	44.0%
WASHINGTON D.C.	23.69	5.76	24.3%	10.24	43.2%

SOURCE: 1990 BOMA EXPERIENCE EXCHANGE REPORT
(Rental income shown represents median of sample data)

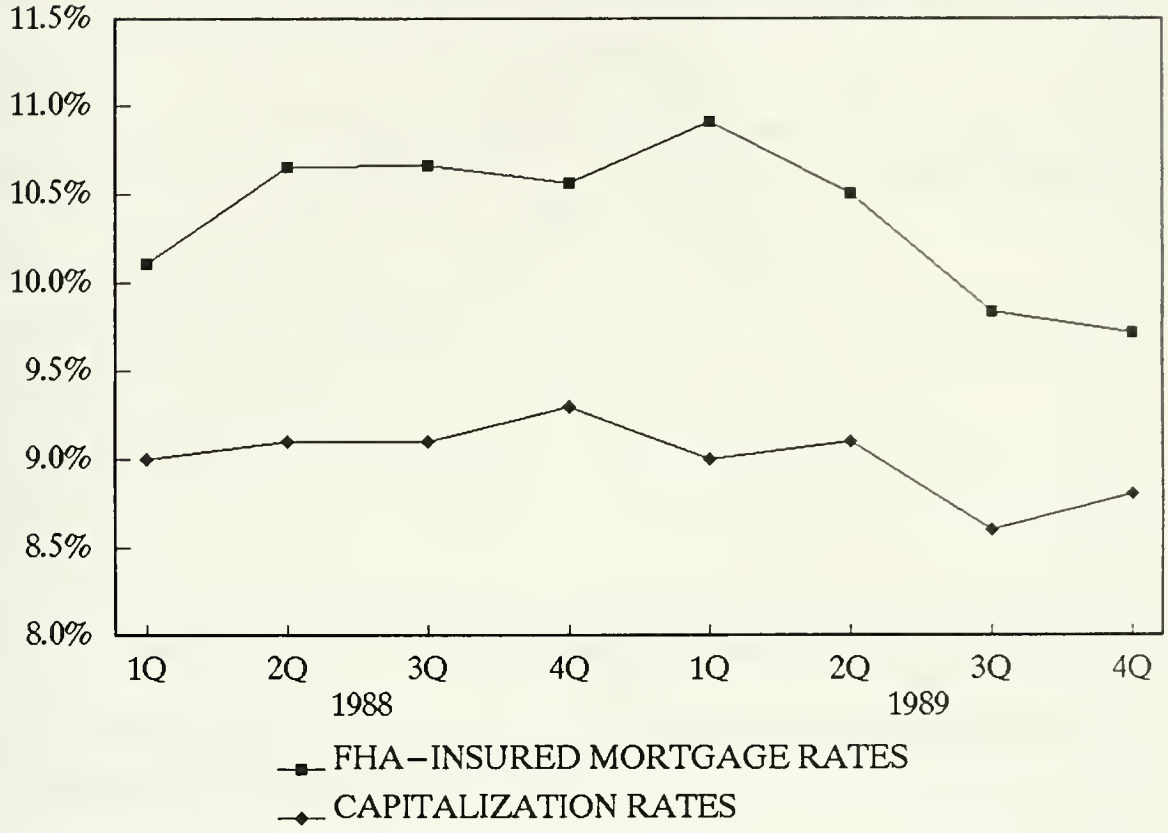


NATIONWIDE COMPARISON OF AVERAGE INCOME/EXPENSES
U.S. PRIVATE SECTOR

	1985	1986	1987	1988	1989
INCOME PER SQ FT	$16.05	$16.67	$17.21	$18.04	$18.79
OPERATING EXPENSE	5.47	5.58	5.75	6.07	6.34
FIXED EXPENSE	2.35	2.51	2.79	2.89	3.06
LEASING EXPENSE	0.82	0.72	0.77	0.94	0.91
TOTAL EXPENSE	7.66	8.11	8.54	8.98	9.42

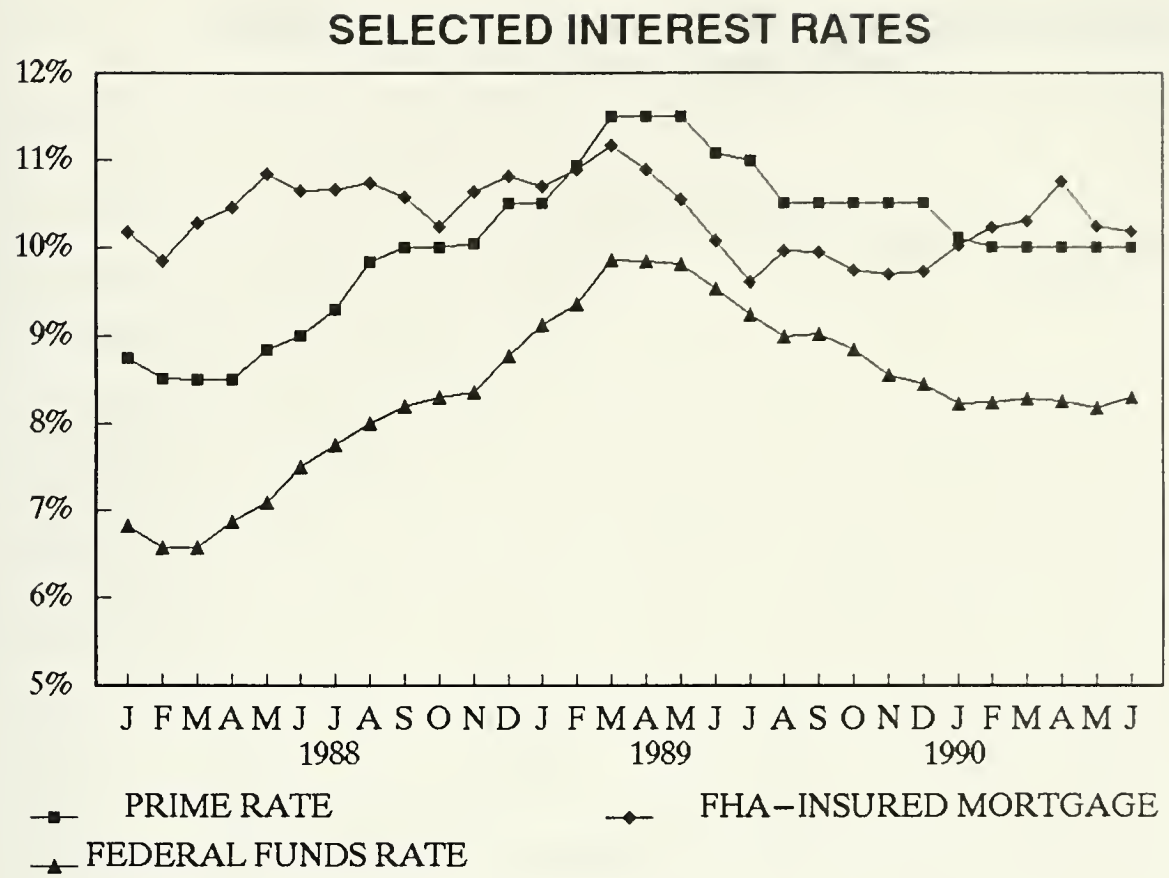
SOURCE: BOMA 1990
Based on a sample of 589 buildings

MORTGAGE AND CAPITALIZATION RATES



		FHA-INSURED MORTGAGE RATES	CAPITALIZATION RATES
1988	1Q	10.10%	9.00%
	2Q	10.65%	9.10%
	3Q	10.66%	9.10%
	4Q	10.56%	9.30%
1989	1Q	10.91%	9.00%
	2Q	10.50%	9.10%
	3Q	9.83%	8.60%
	4Q	9.71%	8.80%

Sources: First District Facts, Federal Home Loan Bank (Mortgage Rates)
Insurance Bulletin, ACLI (Capitalization Rates)



	PRIME RATE				FHA-INSURED MORTGAGE RATE				FEDERAL FUNDS RATE		
	1988	1989	1990		1988	1989	1990		1988	1989	1990
JAN	8.75	10.50	10.11	JAN	10.17	10.69	10.01	JAN	6.83	9.12	8.23
FEB	8.51	10.93	10.00	FEB	9.86	10.88	10.22	FEB	6.58	9.36	8.24
MAR	8.50	11.50	10.00	MAR	10.28	11.16	10.30	MAR	6.58	9.85	8.28
APR	8.50	11.50	10.00	APR	10.46	10.88	10.75	APR	6.87	9.84	8.26
MAY	8.84	11.50	10.00	MAY	10.84	10.55	10.23	MAY	7.09	9.81	8.18
JUN	9.00	11.07	10.00	JUN	10.65	10.08	10.18	JUN	7.51	9.53	8.29
JUL	9.29	10.98		JUL	10.66	9.61		JUL	7.75	9.24	
AUG	9.84	10.50		AUG	10.74	9.95		AUG	8.01	8.99	
SEP	10.00	10.50		SEP	10.58	9.94		SEP	8.19	9.02	
OCT	10.00	10.50		OCT	10.23	9.73		OCT	8.30	8.84	
NOV	10.05	10.50		NOV	10.63	9.69		NOV	8.35	8.55	
DEC	10.50	10.50		DEC	10.81	9.72		DEC	8.76	8.45	
AVERAGES	9.32	10.87	10.02	AVERAGES	10.49	10.24	10.28	AVERAGES	7.57	9.22	8.25

Sources: Statistical Release, Federal Reserve Bank
First District Facts, Federal Home Loan Bank

ESTIMATES OF QUARTERLY VACANCY RATES

FOR CLASS A OFFICE SPACE

	1988				1989			
SOURCE	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
B.R.A	5.0	5.3	9.0	12.0	11.7	11.5	11.0	11.5
SPAULDING & SLYE	6.2	7.8	11.5	12.2	11.8	11.4	11.2	12.0
MEREDITH & GREW	5.8	7.5	9.7	12.2	12.0	12.6	11.0	11.8

Source: Boston Redevelopment Authority

Exhibit 20

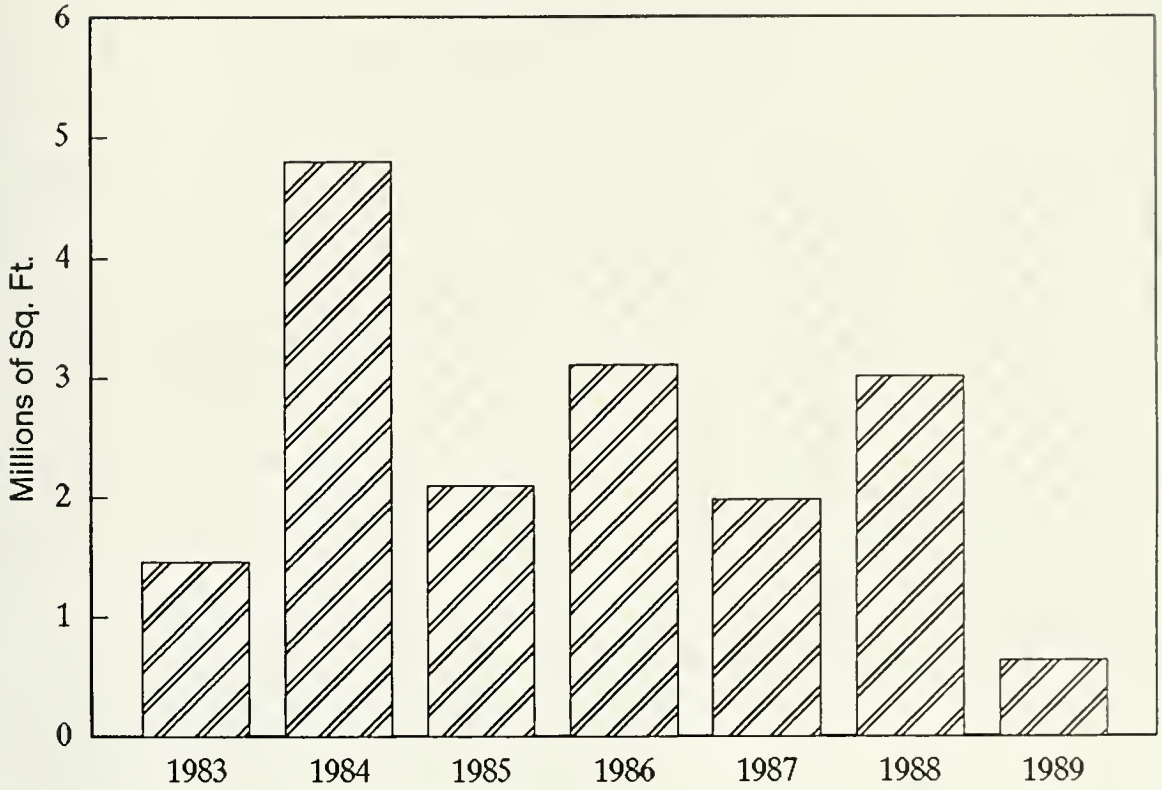
OFFICE VACANCY RATES

	3/88	6/88	9/88	12/88	3/89	6/89	9/89	12/89
NATIONAL	16.3	16.3	16.3	16.2	16.1	16.2	16.7	16.7
CLEVELAND	14.8	13.3	9.3	8.5	8.4	9.0	8.3	8.1
WASHINGTON, D.C.	11.2	10.5	9.4	8.9	8.3	9.6	9.1	9.1
CHICAGO	11.3	11.3	11.2	10.4	10.9	11.0	11.1	11.4
MANHATTAN, MIDTOWN	9.8	9.6	9.4	10.5	10.5	9.8	10.2	11.4
PHILADELPHIA	11.6	12.7	11.7	11.4	11.6	9.9	10.6	11.9
BOSTON	**8.1**	**9.6**	**10.7**	**12.6**	**12.0**	**12.8**	**12.8**	**12.6**
LOS ANGELES	13.3	14.6	12.3	13.5	12.7	12.9	13.4	13.4
ATLANTA	14.4	16.0	16.9	15.0	14.5	14.3	13.8	13.4
SAN FRANCISCO	13.6	14.3	13.8	13.2	15.6	15.6	15.3	13.6
DETROIT	12.2	12.3	12.0	10.9	10.0	10.4	10.8	13.6
SEATTLE	11.1	9.6	10.9	14.2	12.5	13.8	15.1	14.0
PORTLAND	19.7	18.9	18.5	16.8	16.2	15.3	15.7	14.6
MANHATTAN, DOWNTOWN	12.6	13.9	14.6	15.2	13.1	13.8	14.1	14.9
MINNEAPOLIS-ST.PAUL	15.7	14.3	19.3	14.7	16.8	15.3	16.8	15.8
SAN DIEGO	9.2	10.9	11.2	10.1	9.8	10.0	13.0	16.0
HOUSTON	21.9	20.6	20.2	19.4	19.4	18.8	18.4	18.5
KANSAS CITY	25.9	26.1	25.7	24.7	20.9	19.6	19.5	18.8
DALLAS	23.0	23.0	24.0	23.5	23.5	22.1	21.9	22.4
ST.LOUIS	20.3	19.2	19.1	19.2	18.3	25.2	24.9	23.7
MIAMI	20.9	20.3	20.6	21.8	22.3	22.3	24.5	24.6
DENVER	29.9	29.1	27.8	26.4	26.1	26.0	25.3	24.9
PHOENIX	18.9	19.5	17.3	18.9	22.5	23.3	25.1	25.9

Source: Coldwell Banker Commercial Office Vacancy Index

NEW CONSTRUCTION IN DOWNTOWN BOSTON

CLASS A OFFICE SPACE

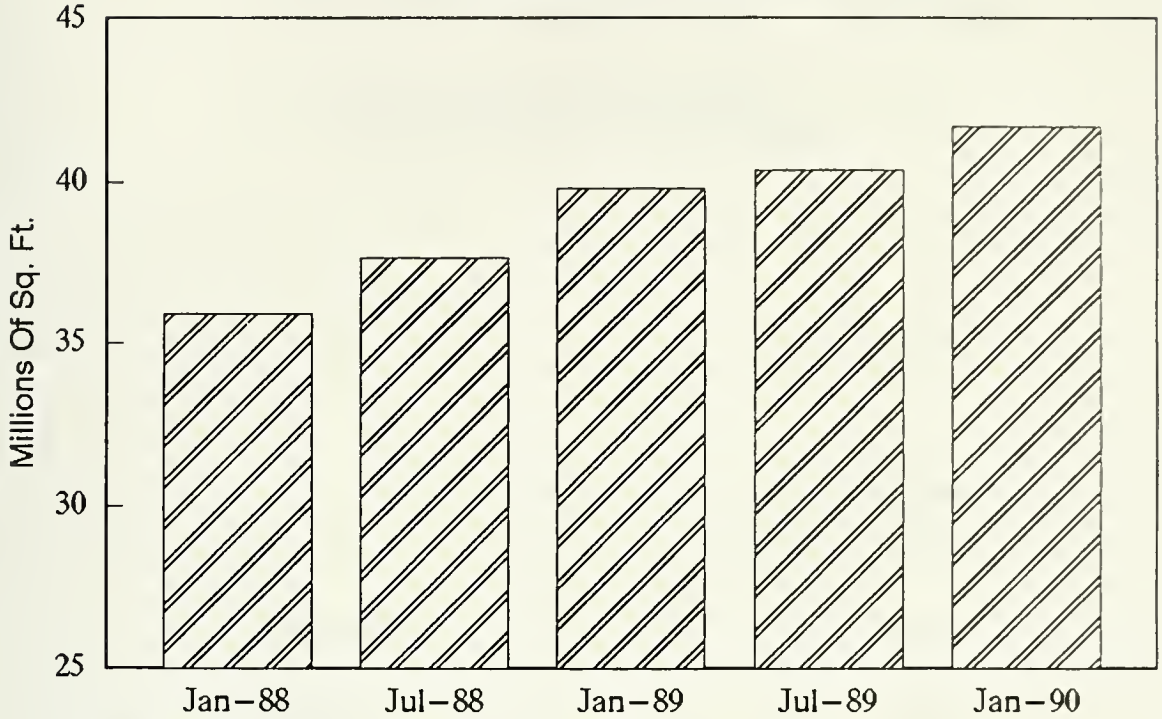


	SQUARE FEET
1983	1,460,530
1984	4,800,000
1985	2,103,400
1986	3,104,200
1987	1,986,000
1988	3,015,065
1989	637,723

Source: Cushman & Wakefield, FOCUS ON BOSTONTRENDS

DOWNTOWN BOSTON OFFICE SPACE

EXISTING INVENTORY



Includes Back Bay, Gov't. Center/No. Station,
So. Station/Fort Pt. Channel and Charlestown

	SQUARE FEET
Jan-88	35,910,490
Jul-88	37,670,155
Jan-89	39,804,206
Jul-89	40,350,869
Jan-90	41,696,672

Source: Cushman & Wakefield, FOCUS ON BOSTONTRENDS

FY'91 ASSESSMENT PERFORMANCE AS MEASURED AGAINST 1987 - 1989 SALES

The Performance Indicator is the Assessment Price Ratio
(Assessment divided by the Sale Price)

	1987 - 1989	
	# SALES	MEDIAN RATIO
RESIDENTIAL		
APARTMENT	58	0.98
4-6 FAMILY	153	0.99
RESIDENTIAL/COMMERCIAL	107	0.92
COMMERCIAL		
OFFICE + RETAIL	85	0.93
INDUSTRIAL	56	0.95
COMMERCIAL CONDO	73	0.96
ALL SALES	567	0.96

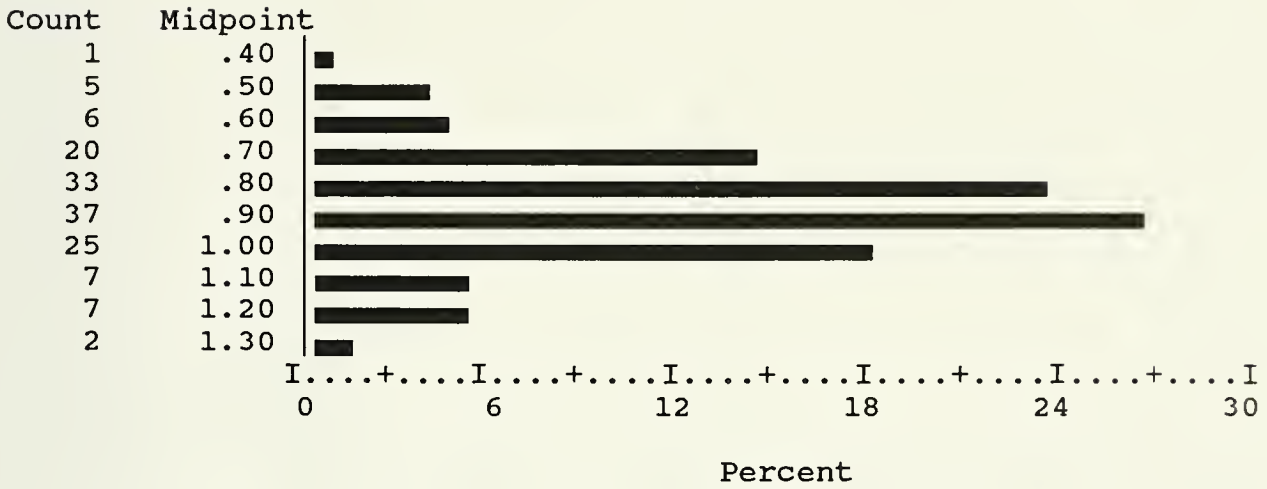
NEIGHBORHOOD ANALYSIS

(1987–1989 Sales Excluding Commerical Land)

Region	Commercial Districts	C – I – CC # Sales	C – I – CC Median Ratio	A – R4 – RC # Sales	A – R4 – RC Median Ratio
EAST BOSTON					
1	5 – 20	8	0.81	39	0.96
CHARLESTOWN					
2	25 – 40	4	0.92	5	0.97
ALLSTON/BRIGHTON					
3	45 – 55	25	0.89	27	1.02
CBD / BACK BAY					
4	60 – 100	72	0.95	74	0.97
SOUTH BOSTON					
5	103 – 120	25	0.94	36	0.97
DORCHESTER					
6	125 – 130 150 – 165	24	0.93	48	0.95
ROXBURY/MATTAPAN					
7	135 – 140, 170	16	0.97	49	0.96
HYDE PARK					
8	173 – 185	10	1.02	15	1.01
JAMAICA PLAIN					
9	145, 190–195	9	0.86	15	0.88
WEST ROXBURY					
10	200 – 245	21	1.01	10	1.01
TOTAL SALES		214	0.93	318	0.97

Downtown & Back Bay Rent Summary 1989

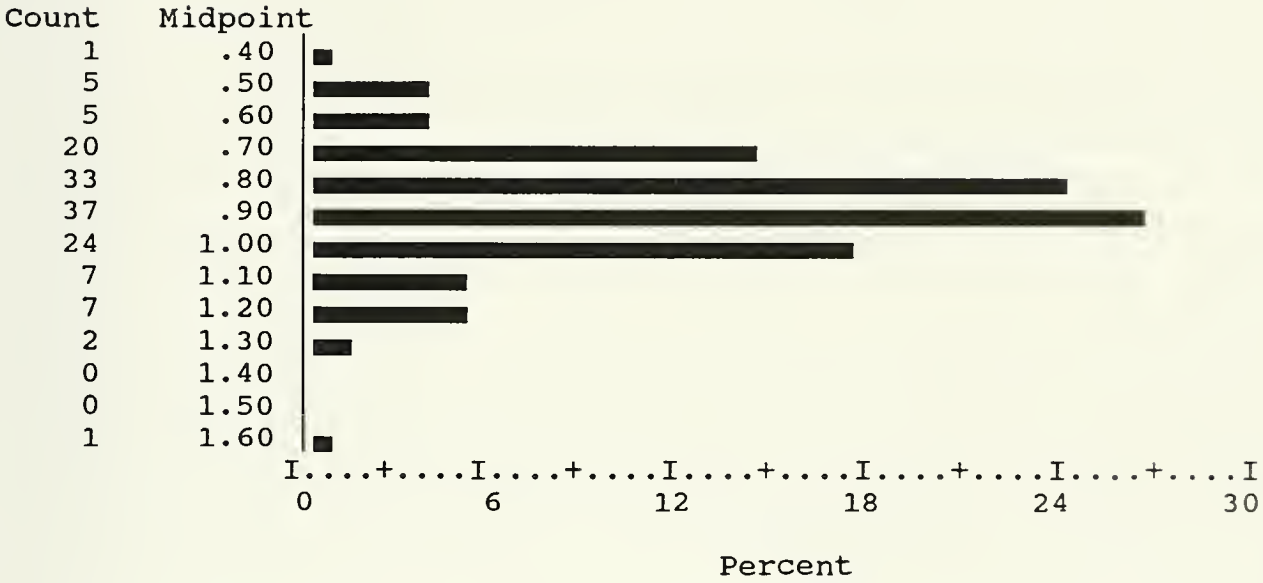
Rent Ratio: System/Spaulding & Slye



Summary Statistics		Percentile	Value
Mean	.866	2.00	.488
Median	.867	5.00	.576
Std Dev	.168	10.00	.655
Minimum	.444	25.00	.758
Maximum	1.294	75.00	.979
Cases	143	90.00	1.083
		95.00	1.169
		98.00	1.252
		99.00	1.282

Downtown & Back Bay Rent Summary 1989

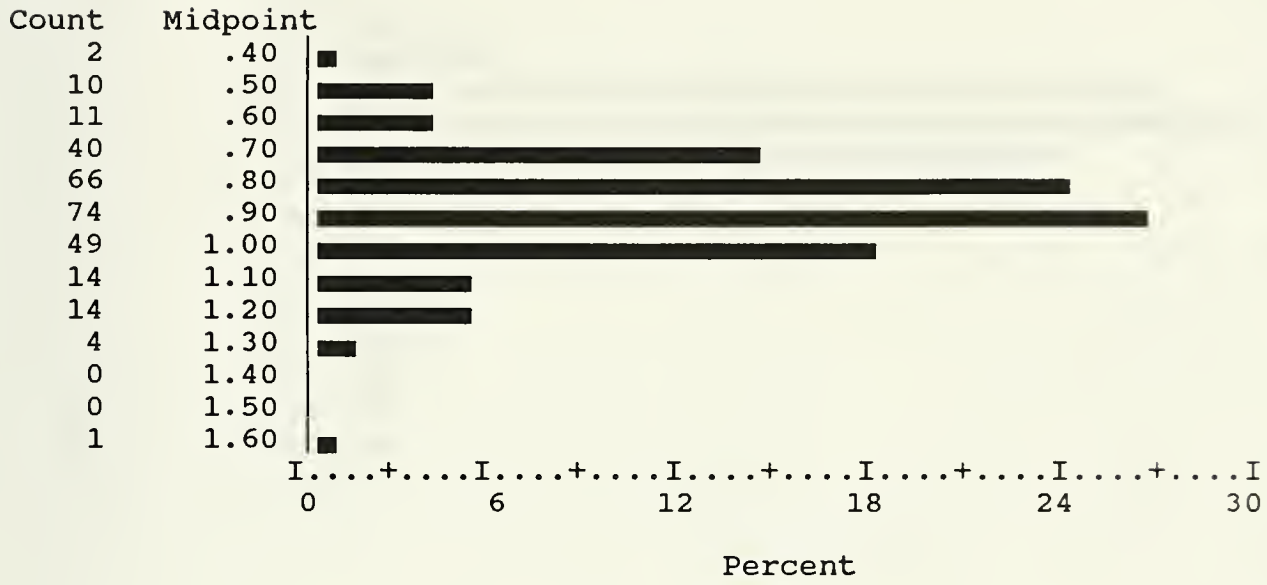
Rent Ratio: System/Leggat McCall



Summary Statistics		Percentile	Value
Mean	.872	2.00	.488
Median	.867	5.00	.576
Std Dev	.178	10.00	.660
Minimum	.444	25.00	.773
Maximum	1.608	75.00	.979
Cases	142	90.00	1.085
		95.00	1.180
		98.00	1.270
		99.00	1.473

Downtown & Back Bay Rent Summary 1989

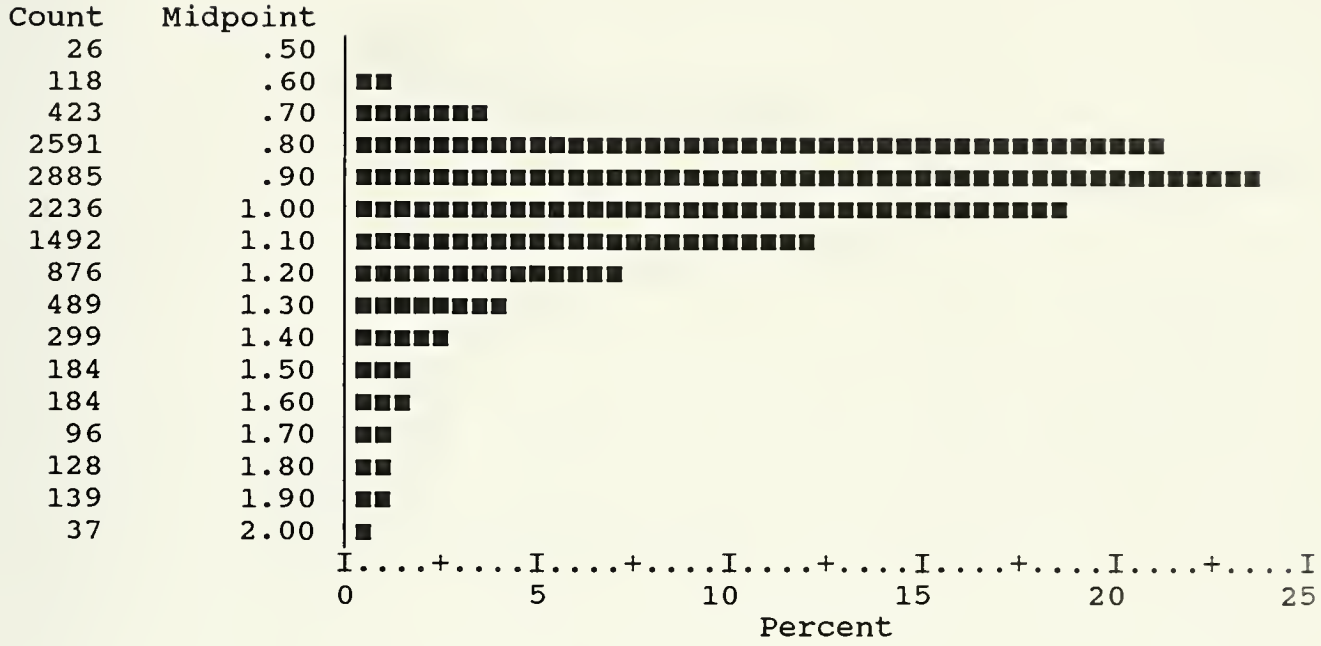
Rent Ratio: System/Spaulding-Leggat



Summary Statistics	
Mean	.869
Median	.867
Std Dev	.173
Minimum	.444
Maximum	1.608
Cases	285

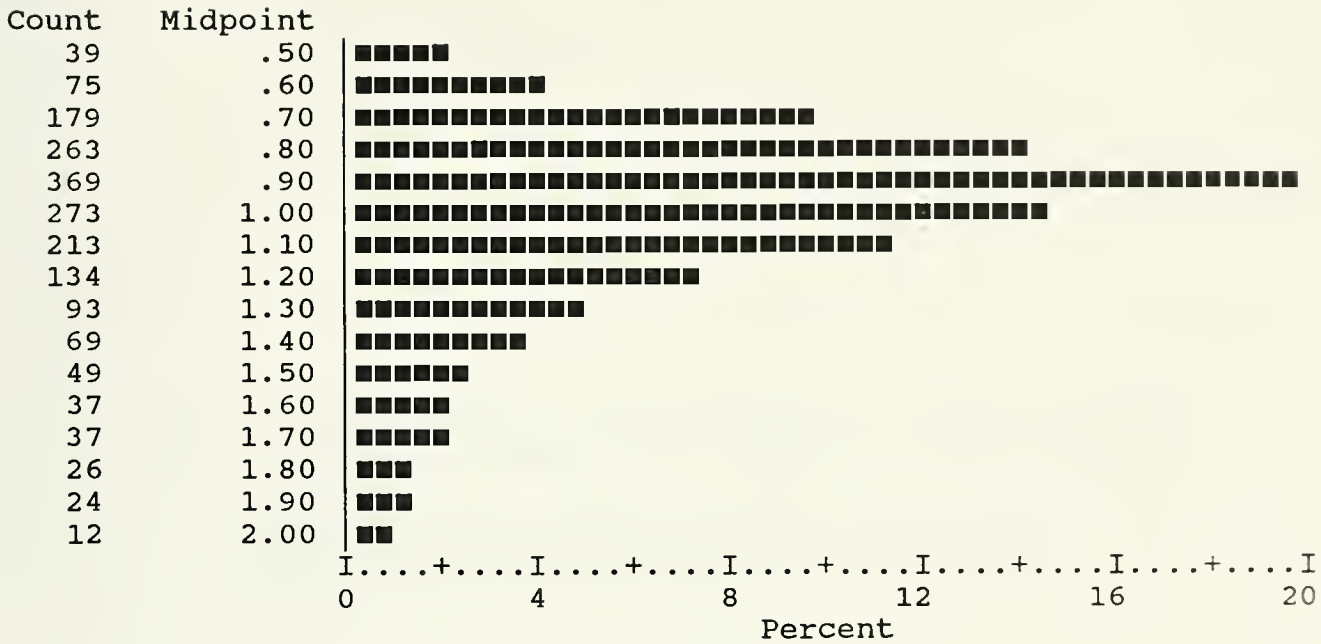
Percentile	Value
2.00	.490
5.00	.576
10.00	.658
25.00	.768
75.00	.979
90.00	1.083
95.00	1.169
98.00	1.255
99.00	1.294

RATIO OF SYSTEM TO I/E RENT - RESIDENTIAL



Summary Statistics		Percentile	Value
Mean	1.011	2.00	.695
Median	.953	5.00	.751
Std Dev	.241	10.00	.797
Cases	12203	25.00	.845
		75.00	1.098
		90.00	1.313
		95.00	1.545
		98.00	1.799
		99.00	1.891

RATIO OF SYSTEM TO I/E RENT - COMMERCIAL



Summary Statistics		Percentile	Value
Mean	1.022	2.00	.547
Median	.958	5.00	.634
Std Dev	.298	10.00	.691
Cases	1892	25.00	.824
		75.00	1.160
		90.00	1.438
		95.00	1.672
		98.00	1.837
		99.00	1.926

Section IV

Description of Assessment Maintenance Process

DESCRIPTION OF ASSESSMENT MAINTENANCE PROCESS

Real property in Boston is constantly changing. Each year, a number of parcels are sold, renovated, demolished, newly constructed, etc. In order to keep the database - and ultimately, assessments - updated, the Assessing Department re-collects property data on these parcels as part of its annual maintenance process.

The maintenance process utilizes the same basic framework for data collection and appraising as a complete revaluation:

DATA COLLECTION. Individual property characteristics for maintenance properties are collected and stored in the Department's computer database.

VALUATION. The physical data characteristics are then combined with the Department's established valuation standards in computerized valuation models which determine the assessed valuation for each property.

FIELD REVIEW. These new values are then reviewed and verified by the field staff to ensure the values are supported by recent sales and are consistent among similar properties.

CERTIFICATION. Upon careful review, the new values are submitted to the Department of Revenue for certification.

Exhibit 26 presents summary data on the maintenance activities of the Department in Fiscal Year 1991.

FY 1991 MAINTENANCE ACTIVITIES
NUMBER OF PARCELS

	COMMERCIAL	RESIDENTIAL
NEW CONSTRUCTION	359	218
RENOVATIONS	73	35
PARCEL SUBDIVISIONS	62	268
FIRES/DEMOLITIONS	32	48
SALES	1,485	10,519
EXEMPT TO TAXABLE	87	138
RESIDENTIAL CONDOS	---	1,445

Source: Boston Assessing Department

Appendix

Sources
Of
Income/Expense Data

APPENDIX

Sources of Income/Expense Data

INCOME/EXPENSE ANALYSIS

A brief description of each income/expense information source follows.

Abatement Information Requisitions Taxpayers who seek an abatement of their property taxes must file with their abatement application an information requisition. In the requisition they must list all pertinent details of the rental income generated by their property and of the typical and nonrecurring expenses incurred in the operation of the property.

Income/Expense Field Sheets Two types of collection - one by the assessors, the other by an independent real estate appraisal firm - involved field visits to certain commercial properties and gathering income and lease information was obtained from building owners, managers or tenants.

Income/Expense Questionnaires In spring 1989 the Department mailed 13,000 Income/Expense Questionnaires to owners and managers of apartment, commercial, and residential/commercial properties. The questionnaires were to be returned within 60 days of their mailing, as required by law. These questionnaires constitute the largest single portion of the I/E database and is the broadest, most comprehensive method of I/E data collection.

FY90

CITY OF BOSTON ASSESSING DEPARTMENT
INCOME AND EXPENSE FIELD SHEET
INCOME

Location: 123 Main Street

Parcel I.D. # 20/01615/000

Is building occupied by owner? (Circle one) Yes No

C.A.D. 240

If YES, how many units (or space) does the owner occupy?

Contact: Bert or Ernie Doe

_____ Apts. 13,000 Sq.ft.

Tel. #: 555-5555

Occ. Code	Type Occupancy	Name of Tenant	Floor	Rentable Area in Sq. ft.	RENTAL RATE Rent as of January 1990	Rent Per: MO	Rent Per: SF	LEASE INFORMATION Base Year	LEASE INFORMATION Years Left	Rent Cntr Y/N
341	Bank	Baily Savings&Loan	1	3,000	$ 22.00		X	1964	4	
345	Office	H. Potter Holding Co.	19	6,000	-0- --OWNER--	---	---	-------	------	
345	Office	H. Potter Investments	16-18	18,000	32.00		X	1960	10	
345	"	" Real Estate	10-15	36,000	29.00		X	1962	8	
345	"	" Trading Co.	2-9	48,000	28.00		X	1965	5	
345	"	Gower Pharmaceuticals	2	3,000	32.00		X	1970	5	
326	Restaurant	Martini's Restaurant	1	4,000	2,000	X		1945	10	
327	" "/Lounge	Nick's Cafe	20	2,600	3,000	X		1986	6	

Potential Gross Rental Income (at 100% occupancy) $ 3,186,000

Parking Income $ 38,000

Plus: Other Income: Vending $ 62,000
(Laundry, vending machine, sign rental etc.)

Is on-site parking available for a fee? (Circle one)
Yes No

If YES:

Number of spaces rented 140

Fee charged per space $ _____

CITY OF BOSTON ASSESSING DEPARTMENT
INCOME AND EXPENSE FIELD SHEET
EXPENSES

	Expense Item	Paid by Owner	Check below if paid by tenant(s)
C1.	Management/Salary/Fee	$ 82,500	
C2.	Outside Agency Fees	-0-	
C3.	Legal/Accounting/Fees	800	
C4.	Advertising Fees	600	
C5.	Other Admin. Expense	21,200	
C6.	Repairs/Maintenance	42,200	
C7.	UTILITIES: Electric	13,200	
C8.	Gas	11,800	
C9.	Water	4,800	
C10.	Common Area	11,400	
C11.	Insurance Expense	3,000	
C12.	Real Estate Taxes	69,000	XXX
C13.	Replacement Reserves	38,000	
C14.	Other:		
C15.			
C16.			
C17.			
C18.			
C20.	TOTAL EXPENSES:	$ 334,500	

Place a check next to each item below included in the rent (✓)

On-site parking _____
Garage Parking _____
Furniture _____
Carpet _____
Appliances _____
Air Conditioning _____
Heat _____
Light _____
Interior Cleaning _____
Trash Removal _____
Other: _____

Place a check next to each feature/ amenity found in the building:

On-site security _____
On-site manager _____
Central Heating _____
Elevators _____
Laundry facilities _____
Fitness Center _____
Swimming pool _____

INCLUDE HERE ANY NOTES ON THE SPECIFIC OPERATION OF THE PROPERTY, including capital improvements, tenant alterations and rental incentives, or other factors that you feel may impact the property value.

_____

_____

_____

_____

_____

Date of Visit: _____ I.D. #: _____

FY91

CITY OF BOSTON ASSESSING DEPARTMENT
INCOME AND EXPENSE FIELD SHEET

Location: 234 Main Street

Is building occupied by owner? (Circle one) Yes No

If YES, how many units (or space) does the owner occupy?

_____ Apts. _____ Sq.ft.

Parcel I.D. # 20 /01615 /100

Appraiser I.D. 636

Date _____

Occ. Code	Type Occupancy	Name of Tenant	Floor	Rentable Area in Sq. ft.	RENTAL RATE Rent as of January 1990	Rent Per: MO	Rent Per: SF	LEASE INFORMATION Base Year	LEASE INFORMATION Years Left	Rent Cntrl Y/N	EXPENSES PAID BY TENANT HEAT	A/C	LIGHT	TAX	INSURE
					$										
350	Comm.	Post Office	B-1	5,000	18.00		X	1982	10		x	x	x	x	x
399	Transportation	Bedford Falls Cab	1	1,200	500	X		1968	3		x	x	x	x	x
404	Industrial	Uncle Billy's String Co.	B	1,650	900	X		1947	7		x	x	x	x	x

over

Occ. Code	Type Occupancy	Name of Tenant	Floor	Rentable Area in Sq. ft.	RENTAL RATE Rent as of January 1990	Rent Per: MO SF	LEASE INFORMATION Base Year	Years Left	Rent Cntrl Y/N	EXPENSES PAID BY TENANT HEAT	A/C	LIGHT	TAX	INSURE
					$									

INCLUDE HERE ANY NOTES ON THE SPECIFIC OPERATION OF THE PROPERTY, including capital improvements, tenant alterations and rental incentives, or other factors that you feel may impact the property value.

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